Measures and Instruments for Quality Improvement in Assisted Living

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Prepared for

The Center for Excellence in Assisted Living

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EXECUTIVE SUMMARY

In October 2014, The Center for Excellence in Assisted Living (CEAL), a collaborative of 11 diverse national organizations dedicated to advancing excellence in assisted living, hosted a two-day invitational symposium entitled "The Future of Assisted Living in the Era of Healthcare Reform." The interactive session was designed to elicit input from a variety of assisted living stakeholder groups regarding how assisted living must evolve to remain a viable service choice amidst the changing landscape of healthcare reform. One of the identified priority areas was the need for data; specifically, that if assisted living is to participate in Managed Care Organizations (MCOs), Accountable Care Organizations (ACOs) and with other organizations, data will need to be collected and shared across settings. The data should assess quality and outcomes, and also reflect individual preferences, goals, and psychosocial needs in addition to medical and healthcare needs. Ultimately, stakeholders across the healthcare continuum must be able to communicate and share data, and data must be transparent for consumers and families/care partners. (See the CEAL report at: http://www.theceal.org/images/white-papers/CEAL-White-Paper-Formatted-FINAL-033115v3.pdf.)

The CEAL Board agreed that the first step to move this priority area forward was to contract with a vendor to design and execute a comprehensive environmental scan of tools used in assisted living and other health and long-term care settings that can be used for quality improvement in assisted living and related residential care settings. After a "request for proposal" process, the CEAL Board entered into a contract with the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill to conduct the environmental scan and prepare this report. The findings in this report will be useful to assisted living providers, and assist the CEAL Board in determining future projects in this area.

Specifically, this project conducted an environment scan of evidence-based tools (measures and instruments) suitable for quality improvement in assisted living. The scan sought tools that have been used in assisted living and other health and long-term care settings -- recognizing that few tools have been developed specifically for assisted living, and that many tools developed in other settings may be used or adapted for assisted living. Further, the scan focused on tools related to five domains of central importance in assisted living: person-centered care, medication management, care coordination/transitions, resident/patient outcomes, and workforce. To further focus this effort, four key areas were specified in each of the five domains.

Inclusion and exclusion criteria were established in relation to the types of tools that were sought, and a comprehensive list of keywords was developed to identify tools implemented in eligible settings of care as related to the areas within each of the domains. Then, the peer-reviewed and grey literature was examined to identify tools that met the criteria. A technical advisory panel provided input on the search terms and initial iteration of tools that resulted from the search. The tools were critiqued in terms of their psychometric and performance characteristics, and recommendations for use were derived based upon the tools identified.

The peer-reviewed literature search generated 9,048 non-duplicative citations; the grey literature search generated 361 sources in addition to websites of 51 organizations. Reviewing all sources, assuring that the referenced tool met eligibility criteria, and omitting duplications, resulted in a total of 254 tools: 136 measures and 118 instruments. Most tools related to workforce (107 tools), followed by resident/patient outcomes (69 tools), care coordination/ transitions (32 tools), medication management (24 tools) and person-centered care (22 tools).

A critical review that considered the tools' utility, similarity of topics, and quality resulted in a recommendation of 96 tools for quality improvement: 6 related to person-centered care, 10 related to medication management, 17 related to care coordination/transitions, 35 related to resident/patient outcomes, and 28 related to workforce. There is some redundancy among these 96 tools, allowing users to consider which best meets their purpose and setting.

Two areas were not adequately addressed by any of the tools. First, there is need for an indicator of resident acuity in assisted living, which could then be used to determine staffing sufficiency. Second, the field would benefit from a tool that provides an overall measurement of quality in assisted living.

1. RATIONALE AND OVERVIEW OF THE PROJECT

Historically, assisted living has focused primarily on quality of life, such as promoting resident respect, dignity, and control. However, as the acuity of assisted living residents has increased, so too has the need to consider quality in terms of clinical outcomes while still maintaining a focus on person-centeredness. This dual focus is important because clinical well-being can impact a resident's quality of life and overall well-being.

In assisted living, as in other care settings, measurement is necessary to provide benchmarks, determine the quality of care, and guide quality improvement. Measuring structures, processes, and outcomes of care allows staff to better understand their services and areas where improvement is indicated. More so, if assisted living communities use similar measurement tools, comparisons can be made across settings, providing benchmarks and information for other stakeholders including prospective residents and their families. In addition, if assisted living is to participate in Managed Care Organizations (MCOs), Accountable Care Organizations (ACOs) and with other organizations, data must be collected and shared.

In October 2014, the Center for Excellence in Assisted Living (CEAL), a collaborative of 11 diverse national organizations dedicated to advancing excellence in assisted living, hosted a two-day invitational symposium to elicit input from a variety of stakeholder groups regarding how assisted living should evolve to remain a viable service choice amidst the changing landscape of healthcare reform. Recommendations underscored the need for measurement in assisted living to assess quality and outcomes, reflecting individual preferences, goals, and psychosocial needs in addition to medical and healthcare needs.

The CEAL Board agreed that the first step to move this priority area forward was to conduct a comprehensive environmental scan of tools used in assisted living and other health and long-term care settings that can be used for quality improvement in assisted living and related residential care settings. The CEAL Board determined it was important to examine tools used across a range of settings such as skilled nursing centers and hospitals, despite the fact that the resident/patient populations in these settings are not identical to those in assisted living. This broad scope serves three key purposes: it informs assisted living staff how other providers are measuring care and outcomes, it provides access to those tools, and it paves the way for the use of similar measures across a range of providers.

Therefore, this project conducted an environment scan of evidence-based tools (measures and instruments) suitable for quality improvement in assisted living. The scan sought tools that have been used in assisted living and other health and long-term care settings -- recognizing that few tools have been developed specifically for assisted living, and that many tools developed in other settings may be used or adapted for assisted living. Further, the scan focused on tools related to five domains of central importance in assisted living: person-centered care, medication management, care coordination/transitions, resident/patient outcomes, and workforce. To further focus this effort, four key areas were specified in each of the five domains.

2. DOMAINS OF FOCUS

For more than 20 years, the intent of assisted living and related residential care settings has been to promote dignity, independence, privacy, autonomy and decision-making.[1] This attention to quality of life is conveyed during the provision of supportive and health-related care, in light of the fact that 75% of assisted living residents require support with activities of daily living, and 95% have chronic health conditions.[2] Consequently, quality improvement efforts in assisted living must address care that relates to both psychosocial and medical health, and also the very staff who provide support and care.

Person-centered care. Person-centered care is central to assisted living, but concern has been raised that assisted living is not as person-centered as originally intended, "lacking, for example, a focus on relationships, empowered staff, meaningful activities, and opportunities for self-worth."[3] Given the increasing focus on person-centered care in nursing homes and home and community-based services[4] throughout the healthcare system -- including by the Centers for Medicare & Medicaid Services -- it is important to measure and monitor person-centered practices in assisted living.

Medication management. The most common supportive care need of assisted living residents is for medication management.[5] The manner in which medications are managed has come under scrutiny in relation to concerns about unlicensed assistive personnel administering medications, the need to tailor medication prescribing, and off-label use of antipsychotic medications, among others.[6,7] Due to residents' ubiquitous need for support with medication management, and the potentially serious nature of inappropriate care, it is important to consider medication management a target for quality improvement.

Care coordination/transitions. Almost one-third of assisted living residents are hospitalized each year, and one-quarter visit an emergency department.[5] Also, 15% die or move to a nursing home each year[8] further highlighting the prevalence of transitions among this population. Most especially, avoidable re-hospitalizations have come under scrutiny by affordable care organizations (ACOs), managed care organizations (MCOs), and others. Care coordination to reduce acute care transfers has been effective in nursing homes,[9] and given the extent of chronic health conditions and health care use in assisted living, there is need to attend to care coordination and transitions in this population as well.

Resident/patient outcomes. Processes of care – such as person-centered care, medication management, and care coordination/transitions – are important because they can impact resident outcomes. Poorer care may result in worse quality of life,[10] medication side-effects,[11] and the need for hospitalization or re-hospitalization.[9] The intent of quality improvement is to promote better resident outcomes, and so it is important to monitor those outcomes.

Workforce. The sufficiency and quality of the workforce that provides support and care to assisted living residents plays an important role in resident outcomes. Not only is consistent staffing considered important for close relationships and person-centered care,[12] but lower staffing levels and more staff turnover relate to numerous and varied resident and staff outcomes in nursing homes.[13] Consequently, it is important to measure and monitor matters related to the workforce when promoting quality in assisted living.

3. AIM and METHODS

The aim of this project was to identify and evaluate evidence-based tools of person-centered care, medication management, care coordination/transitions, resident/patient outcomes, and workforce that have been implemented in assisted living and other health and long-term care settings, and can be used for quality improvement in assisted living and related residential care settings.

Focus: Because the domains are broad, the search was organized and limited to four key areas within each domain, reflecting topics of importance and evaluation in previous work.

Five Domains and Key Areas of Study
Person-centered care[14]
• Resident-direction
• Homelike atmosphere
• Close relationships
• Staff empowerment including collaborative decision making
Medication management[15]
• Medication risk (prescribing)
• Medication self-administration
• Medication errors (administration)
• Medication reconciliation
Care coordination/transitions[16]
• Information transmission (e.g., timeliness, completeness)
• Tracking/response to information (e.g., proactive vs. reactive provider)
• Efficiency (e.g., unnecessary readmissions, duplication of tests)
• Patient experience
Resident/patient outcomes[17]
• Physical function (physical activities of daily living, including mobility)
• Psychosocial well-being (cognition, affect, quality of life)
• Satisfaction
• Medical events (including falls; acute care use is included in care coordination/transitions)
Workforce[18]
• Turnover
• Consistent assignment (e.g., staffing models, caregiver time with residents)
• Stress, burnout
• Satisfaction

Evidence-based tools were identified through a comprehensive search of the peer-reviewed and grey literature (detailed below). Definitions regarding inclusion and exclusion criteria were specified in conducting the search.

Definitions and Inclusion Criteria

"Tools" include measures and instruments that generate a score:
   • Measure: Not based on scales or indices; includes a numerator and a denominator
   • Instrument: Based on scales or indices; includes more than two items that are aggregated in some way

The tool measures a key area within the five domains
Tools that measure end-of-life care and outcomes are included because they relate to transitions
Eligible tools were developed or used in the last ten years in at least one target setting in the United States
Exclusion Criteria
Tools used for screening
Tools used for care planning, including those to assess resident preferences
Tools used for clinical care
Tools exclusively relevant to hospital and/or home care
Tools related exclusively to outcomes for informal (family) caregivers
Tools used in qualitative studies, editorials, dissertations, conference abstracts, and op-ed pieces
Tools that are propriety

Literature Search: The peer-reviewed and grey literature was searched to identify <u>tools</u> (measures and instruments) implemented in specific <u>settings</u> of care as related to the <u>key areas within each domain</u> (i.e., 20 key areas in total). Sample key words are provided below, and a complete list is provided in Appendix I.

- Sample key words for <u>tools</u> included tool, measure, instrument, survey, interview, inventory, questionnaire, scale, index, profile, toolkit, protocol, program evaluation, assessment, test

- Sample key words for <u>settings of care</u> included long-term care, assisted living, residential care, board and care, senior housing, home care, home and community based, dementia care, memory care, nursing home, adult day center, adult day program, respite care, hospital, transitional care

- Sample key words for each area within each domain included:

  o Person-Centered Care
    - Resident direction (e.g., autonomy)
    - Homelike atmosphere (e.g., home)
    - Close relationships (e.g., familiarity)
    - Staff empowerment (e.g., decision making)

  o Medication Management
    - Risk (e.g., prescribing)
    - Self-administration (e.g., capacity)
    - Errors (e.g., preparation)
    - Reconciliation (e.g., orders)

- Care coordination/transitions
  - Information transmission (e.g., timeliness)
  - Tracking/response (e.g., communication)
  - Efficiency (e.g., readmission)
  - Patient experience (e.g., distress)

- Resident/patient outcomes
  - Physical function (e.g., mobility)
  - Psychosocial well-being (e.g., depression)
  - Satisfaction
  - Medical events (e.g., falls)

- Workforce
  - Turnover (e.g., separation)
  - Consistent assignment (e.g., ratio)
  - Stress, burnout (e.g., burden)
  - Satisfaction

A research librarian created every possible combination of search terms related to tools, settings, and domains/key areas to construct search filters to systematically search the following databases of peer-reviewed literature: Cochrane; Cumulative Index to Nursing and Allied Health (CINAHL); Health and Psychosocial Instruments (HAPI); PsycInfo; and Pubmed (Medline). Peer-reviewed literature is that which has been vetted and approved by scholars for quality and importance.

Synonyms, various spellings, tenses, and singular/plural forms of each term and combinations of terms were searched. Search results were restricted to materials publicly available in English and published within the last ten years.

Coincident with the peer-reviewed search, and using the same keywords, the research librarian completed searches of the Grey Literature Reports (New York Academy of Medicine) to identify books, government reports, newspaper articles, press releases, policy reports, and other non-peer reviewed materials. Additional searches used the Google search engine to identify clinical performance guidelines, accreditation standards, quality improvement initiatives, and mission statements of relevant organizations and groups (e.g., John A. Hartford Foundation, American Health Care Association/National Center for Assisted Living, Agency for Healthcare Research and Quality, Advancing Excellence in America's Nursing Homes, LeadingAge, Pioneer Network). Specifically, the websites of 51 relevant organizations were searched (see Appendix II).

Technical Advisory Panel: A panel of 14 individuals with expertise in long-term care and quality measurement served as technical advisors. They reviewed and offered feedback related to the inclusion and exclusion criteria, the literature search terms, and the initial iteration of tools resulting from the search of the peer-reviewed and grey literature. In addition to identifying tools that were missing, they suggested that the final report differentiate measures from

instruments, that it indicate whether the tool relates to a structure, process, or outcome of care[19], and whether it is used to capture information at the system-level (e.g., all residents or staff) or person-level (e.g., select residents or staff). The members of the technical advisory panel and their affiliations are indicated below.

Organization	Panel Member
Concepts in Community Living	Mauro Hernandez, PhD
Hartford Institute for Geriatric Nursing	Tara Cortes, PhD, RN
Ivy Hall Senior Living	Joan Hyde, PhD
Joint Commission, Nursing Care Center Accreditation	Gina Zimmerman, MS
Medicare Quality Improvement Organization Program, Alliant Health Solutions	Adrienne Mims, MD, MPH Kimberly Rask, MD, PhD
National Adult Day Services Association	Teresa Johnson, MBA
National Nursing Home Quality Care Collaborative, Qualis Health	Traci Treasure, MS, CPHQ, LNHA Aimee Ford, RN, MS Meghan Donahue
National Center for Assisted Living (NCAL)	Lindsay Schwartz, PhD
National Quality Forum, Home and Community Based Services Quality Measurement and Person-Centered Care Quality Measurement Projects	Andrew Anderson, MPH Mitra Ghazinour, MPP
Pioneer Network	Amy Elliot, PhD

Data Management: Search results were exported into an Endnote (version 7) database, and duplicates removed. The Endnote library was organized by domain and area.

Synthesis and Critique: The abstract/summary of all sources was reviewed. Those that referenced tools that potentially met the inclusion criteria generated a second-level search (when necessary), to obtain more information about the tool itself. Then, all tools were critically reviewed with results entered into a Microsoft Access (version 2013) database. A data extraction form was developed to record descriptive information and psychometric performance characteristics of each tool. Many of the items recorded and scored were derived from the COSMIN initiative (i.e., Consensus-based Standards for the Selection of Health Measurement Instruments), which recommends four areas to assess the methodological rigor of health-related measures: reliability (the extent to which items are scored consistently over time and by different raters), validity (the extent to which items measure the constructs they intend to measure), responsiveness (the extent to which the tool can detect change over time), and interpretability (the extent to which the tool can inform care).[20]

Four health services researchers with expertise in long-term care and assisted living critiqued the tools according to a scoring guide used in similar efforts[21,22] and refined for this project. The critique indicated the name of tool; the primary domain to which it related; whether it primarily measured a structure, process, or outcome of care; the source of the information (i.e., administrative records, chart, staff, resident, family, other); the number of items; settings in which the tool has been used; processes used to obtain the information (i.e., record review, interview, questionnaire, observation, other); and a key/relevant citation (where indicated).

Quantitative Review: The four researchers also rated the tool's psychometric properties and performance characteristics on a 0-2 scale, using five items to rate instruments (reliability, validity, interpretability/utility, ease of use, and availability of benchmarks) and two items to rate measures (ease and benchmarks), as shown below. The raters pilot-tested the recording and scoring strategy, and met repeatedly to assure commonality in scoring.

Quantitative Scoring Strategy	
SCORING FOR INSTRUMENTS	
Component	**Scoring**
Reliability (test-retest, inter-rater, internal consistency)[23]	2 (good) if reliability coefficients generally ≥ 0.80 1 (fair) if reliability coefficients generally 0.60–0.79 0 (poor) if reliability coefficients generally <.60 or no information
Criterion validity (convergent, discriminant, predictive, concurrent)[24]	2 (good) if reliability coefficients generally ≥ 0.60 1 (fair) if reliability coefficients generally 0.40–0.59 0 (poor) if reliability coefficients generally <.40 or no information
Interpretability/utility	2 (good) if range of scale is used and reflects potentially actionable items 1 (fair) if range of scale is used or reflects potentially actionable items 0 (poor) if range of scale is not used and does not reflect potentially actionable items
SCORING FOR INSTRUMENTS AND MEASURES	
Component	**Scoring**
Ease of use	2 (good) if not time intensive to train/administer and has simple scoring 1 (fair) if not time intensive to train/administer or has simple scoring 0 (poor) if time intensive to train/administer and scoring is not simple
Benchmarks for long-term care	2 (good) if benchmarks existed 0 (poor) if no benchmarks existed

Finally, a total score was generated for each tool using SAS Version 9.4. The raw score of an instrument could range from 0-10 (two points for each of five items), and the raw score of a measure could range from 0-4 (two points for each of two items). To facilitate comparison, all final scores were converted to a 10 point scale, such that, for example, a measure score of 2 (of 4) translated to a 5 (of 10), and a measure of score of 4 (of 4) translated to a 10 (of 10).

Two sets of tables were created for all tools. The first (primary) table summarizes the tool's name, description, and construct (structure, process, or outcome); indicates whether it is a

measure or instrument, and if it is an instrument, the number of items; and also the source of the information, the process to obtain the information, and the score. The second table indicates whether the tool reflects information at the system or person (individual) level, some of the settings in which it has been used, its psychometric and performance characteristics, and where relevant, a citation; in general, measures do not require and so do not include a citation.

Recommendations and Gap Analysis: After scores were derived for all tools, they were reviewed by the four-member investigative team in collaboration with the consultant, an expert in assisted living care administration, provision, and policy. Recommendations were established in consideration of the intent of the tool, its score, and its comparative advantage over other tools that assess the same domain – all with special consideration regarding their utility for quality improvement in assisted living. In addition, after reviewing all recommended tools, critical consideration was given to what tools would be helpful that were not identified in this scan, and what modifications were indicated for existing tools.

4. RESULTS

The peer-reviewed literature search generated 9,048 non-duplicative citations; the grey literature search generated 361 sources in addition to websites of 51 organizations. Reviewing all sources, assuring that the referenced tool met eligibility criteria, and omitting duplications, resulted in a total of 254 tools: 136 measures and 118 instruments. The primary domain captured by each of these tools is shown below.

Number of Tools (Including Measures and Instruments) Identified For Each Domain			
Domain	Tools	Measures	Instruments
Person-centered care	22	1	21
Medication management	24	20	4
Care coordination/transitions	32	28	4
Resident/patient outcomes	69	28	41
Workforce	107	59	48

Tables 1 and 1a (Table 1 being the primary table and Table 1a being the secondary table) alphabetically list all tools; the third column of Table 1 indicates the domain of each tool. Total scores for all tools range from 1 to 10, reflecting wide variation in tool quality and use. Twenty-three tools received the highest possible score of 10, and two tools received the lowest possible score of 1. The average score across all domains is 5.7. Tables 2 and 2a, through 6 and 6a, list the tools grouped by their domain, arranged by score.

Person-centered care. The 22 person-centered care tools largely use interviews or questionnaires with residents, staff, and others, and also observations, to assess structures, processes, and outcomes of person-centered care. Some rely on few items and assess discrete components (such as the 4 item Structured Observation of Morning Care) and others rely on many items that are wide-ranging (such as the 175 item Physical and Architectural Features Checklist from the Multiphasic Environmental Assessment Procedure). Of the tools identified, only one – the Commonwealth Culture Change Survey, which measures the presence or absence of culture change practices in nursing homes – is characterized as a measure. As shown in Tables 2 and 2a, scores range from 1 to 8 with an average score of 5.4; three tools received a score of 8.

Medication management. The 24 medication management tools largely use chart abstraction, and also questionnaires with staff, to assess processes and outcomes of medication management. Unlike the person-centered domain, all except four of the tools are measures. Components that are assessed include medication reconciliation, knowledge of medication administration, and appropriate prescribing, as well as the number and percent of residents across numerous categories. As shown in Tables 3 and 3a, scores for this domain range from 5 to 10 with an average score of 6.3. Five tools – all measures -- received the highest score of 10.

Care coordination/transitions. The 32 care coordination/transitions tools largely use chart abstraction and interviews with residents and families to assess processes and outcomes of

care coordination/transitions. Similar to the medication management domain, all except four of the tools are measures. Components that are assessed include involvement in transition planning and communication, as well as the number and percent of residents across numerous categories. As shown in Tables 4 and 4a, scores in this domain range from 2.5 to 8 and the average score is 4.9.

Resident/patient outcomes. The 69 resident/patient outcome tools largely use interviews or questionnaires with residents and families, as well as chart/record abstraction, to assess outcomes, and to a lesser extent, processes of care. Quite notably, the measures include those from Nursing Home Compare (Minimum Data Set) records, all of which are rated highly due to ease of use and the availability of benchmarks. Instruments assess quality of life and satisfaction, as well as function, pain, and social engagement, and include some that are dementia-specific. As shown in Tables 5 and 5a, scores in this domain range from 1 to 10 and the average score is 6.8. Thirteen measures – all derived from Nursing Home Compare – received the highest score of 10.

Workforce. The 107 workforce tools largely use interviews or questionnaires with staff, as well as record abstraction, to assess structures, processes, and outcomes related to the workforce. Measures assess consistent assignment, turnover, and staffing ratios, with the large number of measures in this area reflecting the varied manner in which staff are categorized and counted. The instruments assess topics such as organizational commitment, supervision, leadership, empowerment, stress, responsibilities, and satisfaction. As shown in Tables 6 and 6a, scores in this domain range from 2 to 10 and the average score is 5.3.

5. RECOMMENDATIONS

The 254 tools were reviewed and recommendations set forth in light of the tools' utility for quality improvement in assisted living.

Overview: Recommendations considered the intent of the tool, its score, and its comparative advantage over other tools that assess the same domain – with special consideration regarding the tool's usefulness for quality improvement in assisted living. The scores were informative, but did not drive the recommendations in and of themselves. It is helpful to present a few overriding points before presenting the recommendations.

> **Individualized Nature of Assisted Living Communities**: Whether or not a tool is useful for a given assisted living community may depend on the characteristics of the community and the resident population. For example, some tools are specific to residents with dementia, and so especially useful when a large proportion of the resident population has cognitive impairment. Recommended tools tended to be those that are conceivably useful to a range of assisted living residences.

> **Scores:** One important component of each tool's score reflects its ease of use and interpretability/utility. The ease of a given assisted living community to use a tool may be dependent on the resources of that community, and as noted above, utility may be dependent on the characteristics and needs of the community. In addition, this environmental scan may have not identified all literature related to psychometric properties, which would affect scoring. Consequently, each score is meant to be generally informative, but not used for decision-making in and of itself.

> **Domains:** Although each tool is indicated as assessing one of the five domains, some actually assess more than one domain. For example, a workforce tool that assesses empowerment is also relevant to person-centered care, given that worker empowerment is important to promote person-centered care. When selecting a tool, users may want to consider a tool that achieves more than one purpose.

> **Constructs**: Similar to the point above, although each tool is indicated as primarily assessing one construct (a structure, process, or outcome of care), some tools actually assess more than one construct. For example, an outcome such as the percent of residents screened for falls also reflects a process of care. Again, when selecting a tool, users may want to consider a tool that achieves more than one purpose.

> **Settings:** This environmental scan identified tools used in assisted living and other health and long-term care settings. Once a tool was identified, an exhaustive search was not conducted to examine all the settings in which the tool had been used. Consequently, information regarding setting may be incomplete.

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Types of Tools: Tracking tools and communication tools, although helpful for quality improvement, were not the focus of this effort.

Process to Obtain Information: When tools ask residents, families, or staff to provide information, they may be interviewed or asked to complete a written questionnaire. In many cases, interviews that are straightforward (that do not include complicated skip patterns instructing the person to not answer select questions) can be administered as questionnaires, which reduces the burden to obtain the information.

Finally, it is important to note that that despite the scope of this effort, some potentially useful tools may have been missed, and staff at some assisted living communities may choose to use tools other than those recommended in this report.

Person-Centered Care.

Six tools are considered to be especially useful for quality improvement in assisted living related to person-centered care. The table below summarizes the tools. All of them are instruments, and the rightmost column lists the developer and either a web link by which to access it or the page number(s) in Appendix III where it can be found.

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Culture Change Scale (CCS)	48 items assessing six sub-scales: 1) system-wide culture change; 2) resident choice; 3) organizational design; 4) empowering supervision; 5) job design; and 6) decision-making. Sample items include "the environment of this facility encourages new ideas; how often can residents eat what they really want; my job duties allow me to enough time to do my job properly." Scores are provided on a 5 point Likert scale and mean scores are derived.	STAFF INTERVIEW	Culture change is a concept that has a large following and is central to person-centered care	University of Minnesota; Pages 1-3
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Resident)	49 items to assess person-centered practices in assisted living and similar long-term care settings, addressing the domains of well-being and belonging (18 items), individualized care and services (12 items), social connectedness (10 items), and atmosphere (9 items). Items are scored on a 4 point Likert scale. Scores for each area and overall are obtained, with higher scores indicating more person-centeredness.	RESIDENT QUESTIONNAIRE	Developed specifically for assisted living by a wide range of stakeholders; measures what is considered to convey person-centeredness to residents; has a companion version for staff	University of North Carolina at Chapel Hill and the Center for Excellence in Assisted Living; http://www.theceal.org/component/k2/item/946
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Staff)	62 items to assess person-centered practices in assisted living and similar long-term care settings, addressing the domains of workplace practices (23 items), social connectedness (16 items), individualized care and services (8 items), atmosphere (8 items), and caregiver-resident relationships (7 items). Items are scored on a 4 point Likert scale. Scores for each area and overall are obtained, with higher scores indicating more person-centeredness.	STAFF QUESTIONNAIRE	Developed specifically for assisted living by a wide range of stakeholders; measures what is considered to convey person-centeredness to staff; has a companion version for residents	University of North Carolina at Chapel Hill and the Center for Excellence in Assisted Living; http://www.theceal.org/component/k2/item/946
Experience of Home Scale	25 items designed to measure the strength of the experience of a meaningful person-environment transaction. Items assess home (e.g., connected to people I love here), not home (e.g., cold and sterile), and boundary (e.g., have privacy). Responses use a 5 point Likert scale of strongly agree to strongly disagree, and the total score is the mean of all items.	RESIDENT QUESTIONNAIRE	Has fewer items than the instruments noted above, but to date is not as psychometrically sound	Yale University; Page 4
Person-Centered Climate Questionnaire	17 items assessing care environments that support residents' personhood in health-care settings. Items assess a climate of safety (e.g., approachable, responsive staff and well-organized environment), everydayness (e.g., homelike) and hospitality (e.g., welcoming). Items are scored on a 6 point Likert scale. The total score ranges from 17 to 102 with a high score indicating a climate that is very person-centered.	RESIDENT QUESTIONNAIRE	Has fewer items than the instruments noted above, but to date is not as psychometrically sound	La Trobe University, Australia; Page 5

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Assisted Living Environmental Quality Scale (AL-EQS)	A summary scale comprised of 15 items from the TESS-NH/RC, reflecting facility maintenance, cleanliness, safety, lighting, physical appearance/homelikeness, orientation/ cueing, privacy, resident appearance, and noise. Each of the 15 components is scored 0-2, with higher scores indicating better environmental quality. The composite AL-EQS measure is a sum of the 15 components, which thus range from 0-30.	OBSERVATION	Not exclusively a measure of person-centered care, but helpful to assess the quality of the environment in areas relevant for residents with dementia	University of North Carolina at Chapel Hill; Pages 6-9

Medication Management.

Ten tools are considered to be especially useful for quality improvement in assisted living related to medication management. The table below summarizes the tools. For the instruments, the rightmost column lists the developer and either a web link by which to access it or the page number(s) in Appendix III where it can be found.

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Medication Tracking Tool (Advancing Excellence)	Six rates related to antipsychotic use in nursing homes: rate of residents on PRNs, for those with dementia, more than one antipsychotic, gradual dose reduction (GDR) attempted, GDR with dose reduction, GDR with medication discontinued.	CHART ABSTRACT	Advocated for use in nursing homes, but applicable to assisted living; antipsychotic use is a concern of organizations including the National Center for Assisted Living (NCAL)	Advancing Excellence in America's Nursing Homes; https://www.nhqualitycampaign.org/files/tools/AE_MedicationTrackingToolInstructions_9-24-13.pdf
Nursing Home Compare Percent of Residents Receiving Antipsychotic Medication (long-stay)	Not applicable	CHART ABSTRACT	Advocated for use in nursing homes, but applicable to assisted living; antipsychotic use is a concern of organizations including the National Center for Assisted Living (NCAL)	
Nursing Home Compare Percent of Residents Who Are Newly Administered Antipsychotic Medications (short-stay)	Not applicable	CHART ABSTRACT	Advocated for use in nursing homes, but applicable to assisted living; antipsychotic use is a concern of organizations including the National Center for Assisted Living (NCAL)	
Medication Administration Practices (MAP)	48 items reflecting knowledge related to infection control, medication monitoring, medication regulation/ documentation, medication administration, technique of administration, terminology, and charting and documentation. Higher scores indicate more knowledge.	STAFF QUESTIONNAIRE	Items are from the North Carolina Medication Technician Examination Study Guide; used in assisted living; scores relate to medication errors	University of North Carolina at Chapel Hill; Pages 10-17
Unnecessary Drug Use Measure	3 items assessing the appropriateness of drug use: lack of indication, lack of effectiveness, and therapeutic duplication, from the Medication Appropriateness Index. Each item is rated as appropriate, marginal, or inappropriate. Scoring indicates unnecessary drugs as determined by a continuous measure of the number of medications that lacked an indication, lacked effectiveness, or involved therapeutic duplication.	CHART ABSTRACT STAFF REVIEW	An important area relevant to quality improvement; requires review by a pharmacy consultant	Center for Health Equity Research and Promotion, VA Pittsburgh Health Care System; Page 18
Percent of people receiving anxiolytic medication	Not applicable	CHART ABSTRACT	Important to assess in relation to non-pharmacologic alternatives and unmet needs	
Percent of people receiving hypnotic medication	Not applicable	CHART ABSTRACT	Important to assess in relation to non-pharmacologic alternatives and unmet needs	
Percent of people receiving medication for depression	Not applicable	CHART ABSTRACT	Important to assess in relation to non-pharmacologic alternatives and unmet needs	

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Percent of residents aged 65 or older who had a medication review within last year	Not applicable	RECORD REVIEW	Important to review appropriateness of medications on an ongoing basis	
Percent of residents receiving antipsychotic with no evidence of psychotic disorder	Not applicable	CHART ABSTRACT	Important to consider in relation to off-label use of antipsychotics that may have serious side-effects	

Care Coordination/Transitions.

Seventeen tools are considered to be especially useful for quality improvement in assisted living related to care coordination/transitions. The table below summarizes the tools. For the instruments, the rightmost column lists the developer and either a web link by which to access it or the page number(s) in Appendix III where it can be found.

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Care Transitions Measure (CTM-15, CTM-3)	15 items assessing care transitions in relation to goals, potential health care needs, site of care, information, understanding, warning signs and symptoms, written plan of care, self-care, confidence, and purpose, side effects, and administration of medications. Items are scored on a 4 point Likert scale. A 3 item version is available and recommended for public reporting.	RESIDENT INTERVIEW	Instrument is endorsed by the National Quality Forum (NQF); the 3 item version relates to taking resident/family preferences into account regarding healthcare needs at transition; understanding self-responsibility for managing health; and purpose of each medication	University of Colorado Health Sciences Center (CTM-15) and National Quality Forum (CTM-3); Pages 19-20
Family Perception of Physician-Family Caregiver Communication (FPPFC)	7 items assessing family perceptions of communication between physicians and family caregivers of individuals who spent their last month of life in long-term care. Sample items include "the doctor always spoke to you, other family caregivers, or the resident about [his/her] wishes for medical treatment at the end of life, and the doctor always kept you or other family caregivers informed about the resident's condition." Items are scored on a 4 point Likert scale and a mean score is derived.	FAMILY INTERVIEW	Developed from data collected from family members in assisted living and nursing homes	University of North Carolina at Chapel Hill; Page 21
Avoidable Re-hospitalization Rate, 30-day Adjusted (and annualized)	The number of unplanned readmissions to any hospital divided by the number of hospitalizations in that period, adjusted for patient characteristics.	CHART ABSTRACT	A measure of importance to affordable care organizations, managed care organizations, and others; adjustment requires input from experts	
Percent of hospice residents screened for pain during admission assessment	Not applicable	CHART ABSTRACT	Pain is an important condition; when used in assisted living, reference to "hospice" should be omitted	
Percent of hospice residents with chart documentation of preferences for life sustaining treatments	Not applicable	CHART ABSTRACT	Preferences for life sustaining treatments are important and should be documented; when used in assisted living, reference to "hospice" should be omitted	
Percent of people discharged to home, hospice, acute care, or other health care facility	Not applicable	CHART ABSTRACT	When used in assisted living, is best reworded in the context of percent of residents for whom transition planning was completed	
Percent of residents discharged from SNF who visited physician within 60 days and had medication reconciliation	Not applicable	CHART ABSTRACT	Medication reconciliation upon admission to assisted living is important to monitor, regardless source of admission	
Percent of residents for whom care plan is created at admission	Not applicable	CHART ABSTRACT	Care planning at admission is important in assisted living	

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Percent of residents for whom care plan is updated annually	Not applicable	CHART ABSTRACT	Care planning updates are important; for those with few health care needs, annual updates may be sufficient	
Percent of residents for whom care plan is updated at status change	Not applicable	CHART ABSTRACT	Care planning at time of status change is important in assisted living	
Percent of residents for whom care plan is updated quarterly	Not applicable	CHART ABSTRACT	Quarterly care planning is important for residents who are in assisted living for more than social needs	
Percent of residents on hospice	Not applicable	CHART ABSTRACT	If a large percent of residents is on hospice, the burden on staff and general mood may affect other residents' quality of life	
Percent of residents with Medical Order for Life Sustaining Treatment (MOLST), Medical Orders for Scope of Treatment (MOST), or Physician Order for Life-Sustaining Treatment (POLST) Completed	Not applicable	CHART ABSTRACT	Medical orders are important if preferences are to be honored	
Rehospitalization Measure, 30-Day Risk Adjusted (AHCA)	Risk adjusted rate calculated as [(actual rehospitalization / expected rehospitalization) x national average]	CHART ABSTRACT	Although more challenging to calculate than the earlier noted avoidable re-hospitalization rate, this measure can be compared to benchmarks	
Safely Reduce Hospitalizations Tracking Tool (Advancing Excellence)	Tracking tool that generates rates of readmissions and transfers, as well as information about related processes and reason for transfer	CHART ABSTRACT	This tool helps providers understand reasons for hospitalizations	Advancing Excellence in America's Nursing Homes; https://www.nhqualitycampaign.org/goalDetail.aspx?g=hosp#tab2
Emergency Department Visit per 'X' resident days	Not applicable	CHART ABSTRACT	Emergency department visits are stressful for residents and may indicate a need for more staff; "per x day" metric is challenging to create, but allows comparisons across other settings	
Hospitalizations per 'X' resident days	Not applicable	CHART ABSTRACT	Hospitalizations are stressful for residents and may indicate a need for more staff; "per x day" metric is challenging to create, but allows comparisons across other settings	

Resident/Patient Outcomes.

Thirty five tools are considered to be especially useful for quality improvement in assisted living related to resident/patient outcomes. The table below summarizes the tools. For the instruments, the rightmost column lists the developer and either a web link by which to access it or the page number(s) in Appendix III where it can be found.

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Nursing Home Compare (MDS) Percent of Residents Who Self-Report Moderate to Severe Pain (long- and short-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
Nursing Home Compare Percent of High Risk Residents With Pressure Ulcers (long- and short-stay)	Not applicable	CHART ABSTRACT	Important outcome especially as assisted living residents are aging in place; allows comparisons to national benchmarks	
Nursing Home Compare Percent of Low Risk Residents Who Lose Control of Their Bowels or Bladder (long-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (long- and short-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (long- and short-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
Nursing Home Compare Percent of Residents Experiencing One or More Falls With Major Injury (long-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
Nursing Home Compare Percent of Residents Who Have Depressive Symptoms (long-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
Nursing Home Compare Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder (long-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
Nursing Home Compare Percent of Residents Who Lost Too Much Weight (long-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
Nursing Home Compare Percent of Residents Who Were Physically Restrained (long-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Nursing Home Compare Percent of Residents Whose Need for Help With ADLs Has Increased (long-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks; also important to inform staffing needs	
Nursing Home Compare Percent of Residents With a Urinary Tract Infection (long-stay)	Not applicable	CHART ABSTRACT	Important outcome and allows comparisons to national benchmarks	
CORE-Q	4 satisfaction questions: (1) In recommending this facility to your friends and family, how would you rate it overall? (2) Overall, how would you rate the staff? (3) How would you rate the care you receive? (4) Overall, how would you rate the food?	RESIDENT INTERVIEW	Items are based on those found to be important in other tools; short; promoted by the National Center for Assisted Living	National Center for Assisted Living; Page 22
Activities of Daily Living Unmet Need	Receipt of assistance (hand-on or supervisory/standby) for difficulty performing any of seven activities of daily living due to a health or physical problem: (a) bathing or showering; (b) dressing; (c) eating; (d) getting in and out of bed or chairs (i.e., transferring); (e) walking; (f) getting outside; and (g) using the toilet, including getting to the toilet. No or insufficient assistance indicates unmet need.	CHART ABSTRACT RESIDENT INTERVIEW	Assessment of unmet needs is important for care planning in assisted living	Yale University; Page 23
Alzheimer's Disease Related Quality of Life (ADRQL)	40 item research instrument used to assess health-related quality of life in persons with Alzheimer's disease and other dementias. Domains include social interaction (12 items), awareness of self (8 items), feelings and mood (12 items), enjoyment of activities (4 items) and response to surroundings (4 items). Each item is scored agree/disagree and a total is converted ranging up to 100 points. A shorter revised form is recommended.	FAMILY INTERVIEW	Quality of life for residents with dementia is an important outcome; family are a feasible respondent group	Johns Hopkins University; Pages 24-25
Assisted Living Resident Satisfaction Scale (ALRSS)	18 items assessing satisfaction in 9 areas: safety/peace of mind, personal attention, staff, knowledge, autonomy, aides, socialization with family, privacy, and activities. Items are scored on a 4 point Likert scale. A family version also exists, which includes 18 items assessing satisfaction in five areas: staff responsiveness, transportation, activities, family member impact, resident responsibilities.	RESIDENT QUESTIONNARE	Satisfaction is an important outcome, and the fact that a family version also exists is a benefit; 18 items is a reasonable number of items	Mather LifeWays Institute on Aging; Unable to obtain scale
Ohio Nursing Home Family Satisfaction Survey (2012)	48 satisfaction items assessing 13 domains: admissions; social services; activities; choice; receptionist and phone; direct care and nurse aides; therapy; administration; meals and dining; laundry; resident environment; family environment; and general questions. Sample items include "does the social worker treat you with respect; are the nurse aides gentle; and does the facility seem homelike?" Items are scored on a 4 point Likert scale, with higher scores reflecting more satisfaction.	FAMILY QUESTIONNAIRE	A seemingly comprehensive questionnaire that also has a resident version and has undergone psychometric testing	Miami University; Pages 26-27
Ohio Nursing Home Resident Satisfaction Survey	51 items assessing satisfaction with activities, environment, food, clinical care, personal care, non-clinical staff services, privacy/autonomy, administration, and an overall assessment. Items are scored on a 4 point Likert scale in terms of frequency.	RESIDENT INTERVIEW	A seemingly comprehensive interview that also has a family version and has undergone psychometric testing	Miami University; Pages 28-29

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Satisfaction With Care at the End of Life in Dementia (SWC-EOLD)	10 items assessing satisfaction with care at the end-of-life for persons with dementia. Sample items include "I feel that my care recipient got all necessary nursing assistance; I felt fully involved in decision making; I felt that all medication issues were clearly explained to me." Items are rated on a 4 point Likert scale, with higher scores indicating more satisfaction.	FAMILY INTERVIEW	Assesses an important outcome that has implications for care and has been recommended after examination in relation to other instruments	Boston University ; Page 30
Measurement Tool for Clinical Practice Guideline Implementation: Measures for Falls and Fall Risk	Rates of clinical care and clinical outcome measures related to falls that address domains of falls recognition, assessment, treatment, monitoring, and outcomes.	CHART ABSTRACT	An important outcome for assisted living residents; has the additional benefit of examining the cause of falls	AMDA/CPG; http://www.cpgnews.org/FF/MeasureTool-Falls.pdf
Mobility Tracking Tool (Advancing Excellence)	Calculates several outcomes based on MDS items. A set of eight mobility items is used to construct two composite scores for each resident: Personal Movement Score, and Life Space Mobility Score. Tracks the percent of residents assessed and percent of those with stable or improved mobility.	CHART ABSTRACT	Instrument may be more specific to rehabilitation/skilled care than desired, but may be worth considering if quality improvement addresses resident mobility	Advancing Excellence in America's Nursing Homes; https://www.nhqualitycampaign.org/goalDetail.aspx?g=mob#tab2
Dementia Quality of Life Instrument (DQOL)	29 items assessing 5 subscales meant to assess the subjective experience of dementia: self-esteem, positive affect/humor, negative affect, feelings of belonging, and sense of aesthetics. Sample items ask about feelings of confidence, happiness, frustration, being useful, and enjoying music. Each item is scored on a 4 point Likert scale, and scores are computed by averaging responses to the items that comprise that subscale.	RESIDENT INTERVIEW	Assesses important outcomes, and allows residents with dementia to themselves report on quality of life	Goldman Institute on Aging; Page 31
End of Life in Dementia – Comfort Assessment in Dying (EOLD-CAD)	14 items assessing symptoms and comfort during the last week of life, with subscales related to physical distress, emotional distress, well- being, and dying symptoms. Scores use a 3 point Likert scale and range from 14-42, with higher scores indicating better symptom control.	FAMILY INTERVIEW	Assesses the quality of dying and has been recommended after examination in relation to other instruments	Boston University ; Page 32
Numeric Rating Scale for Pain	1 item measure of pain intensity in adults. The intensity of pain is scored using a 0-10 rating scale anchored by terms describing pain intensity. A rating is given for the intensity of pain experienced in the last 24 hours.	RESIDENT QUESTIONNAIRE	A simple indicator of pain intensity; a companion visual analogue scale with faces may be indicated for resident s with dementia	Margo McCaffery, Independent Consultant; Page 33
Pleasant Events Schedule Nursing Home (PES-NH)	30 daily activities available in nursing homes, rated in relation to the extent to which activities were offered and available during the last month, each scored on a 3 point Likert scale, as well as the extent to which the resident enjoys the activity now and in the past. Sample activities include sitting, walking, or rolling wheelchair outside, laughing, wearing favorite clothes, and grooming. The sum represents the frequency of these activities during the last month. The instrument is intended to be used in the context of behavioral or cognitive–behavioral therapy for depression.	RESIDENT QUESTIONNAIRE	Activities programming is an important component of assisted living; tool is intended to assess change in outcomes	University of Louisville; Page 34

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Short Pleasant Events Schedule for Alzheimer's Disease (PES-AD)	20 items rated in relation to the extent to which activities were offered and available during the last month, each scored on a 3 point Likert scale, as well as the extent to which the resident enjoys the activity now and in the past. Sample activities include being outside, laughing, exercising, and grooming. The sum represents the frequency of these activities during the last month. The instrument is intended to be used in the context of behavioral or cognitive–behavioral therapy for depression.	RESIDENT QUESTIONNAIRE	Activities programming is an important component of assisted living; tool is intended to assess change in outcomes; tool captures activities relevant to residents with dementia	University of Washington; Page 35
UCLA Loneliness Scale	20 items reflecting subjective feelings of loneliness and also feelings of social isolation. Responses are on a four point Likert scale, ranging from never to often. Sample items include "I have nobody to talk to; I feel left out; people are around me but not with me." Scores are summed, with higher scores indicating more loneliness. (Other versions with reverse scored items and simplified wording are available.)	RESIDENT QUESTIONNAIRE	Loneliness is an important outcome given the intent of assisted living to promote social engagement	University of California, Los Angeles; Page 36
Quality of Life Scale (QOLS)	16 items assessing quality of life in terms of material and physical well-being; relationships with other people; social, community, and civic activities; personal development and fulfillment; and recreation. Sample items relate to health, having and raising children, and socializing. Items are rated on a 7 point Likert scale, and summed to create a total score.	RESIDENT QUESTIONNAIRE	A shorter quality of life scale than the instruments noted above, and is not specific to dementia; psychometric properties are poorer	Oregon Health Sciences University; Page 37
Percent of residents screened for future fall risk at least once a year	Not applicable	CHART ABSTRACT; RECORD ABSTRACT	Falls are an important outcome among assisted living residents	
Percent of residents with a history of falls who have a plan of care for fall documented	Not applicable	CHART ABSTRACT	Care to address falls risk is important for assisted living residents	
Percent of residents with in-house acquired pressure ulcers	Not applicable	CHART ABSTRACT	In-house acquired pressure ulcers are of special concern	
Percent of residents with persistent indicators of dementia and no diagnosis (long and short stay)	Not applicable	CHART ABSTRACT	Documenting dementia is important to assure proper care planning, including medication prescribing	
Perceptions of Pain Management	5 items related to resident assessment of pain management, assessing whether they ever have pain/discomfort that prevents sleep or wakes them from sleep, ever having to wait too long for pain medication, the extent to which nurses avoid pain, receiving information about medications, and being given enough medication to treat pain/discomfort. A count of areas for improvement is derived.	RESIDENT QUESTIONNAIRE	Treatment of pain is important for assisted living residents	Brown University; Page 38

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Quality of Dying in Long-Term Care – Cognitively Intact (QOD-LTC-C) (An 11 item version for all decedents [both cognitively intact and impaired] is also available; QOD-LTC)	23 items assessing the quality of dying in long-term care, appropriate to rate care for cognitively intact decedents. Each item refers to a potentially important aspect of dying, reflecting domains of sense of purpose, closure, control, social connection, and preparatory tasks. Sample items include "appeared to be at peace" and "participated as much as wanted in decisions about care." Items scored on five point Likert scale.	FAMILY INTERVIEW	A measure of the quality of dying that is not specific to residents with dementia; was developed for nursing home and assisted living residents	University of North Carolina at Chapel Hill; Page 39
Assisted Living Social Activity Scale (AL-SAS)	11 items reflecting participation in activities (yes/no) during the past week. Items reflect three factors of social activity participation: private activities (writing letters, reading, working on a hobby, talking on the telephone), group activities (arts and crafts, playing cards/bingo/ games, attending religious services, going to the movies), and outings (to eat/drink, shopping/browsing, for walks). Scores can be examined as individual items or by subgroup.	STAFF INTERVIEW	A tool of social activity provision that can be completed by staff	University of North Carolina at Chapel Hill; Page 40

Workforce.

Twenty-eight tools are considered to be especially useful for quality improvement in assisted living related to the workforce. The table below summarizes the tools. For the instruments, the rightmost column lists the developer and either a web link by which to access it or the page number(s) in Appendix III where it can be found.

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Consistent Assignment Tracking Tool (Advancing Excellence)	Tracks the number of caregivers each resident has for the month and calculates the percent of residents meeting a nursing homes target number.	CHART ABSTRACT	Consistent staff assignment is important for person-centered care; however, it is not always preferred by staff, and so should be considered in relation to staff satisfaction, stress, and burnout	Advancing Excellence in America's Nursing Homes; https://www.nhqualitycampaign.org/goalDetail.aspx?g=ca#tab2
Eaton Instrument for Measuring Turnover	Number of new employees (full or part time) divided by the number of employees in that category over a 12-month period.	RECORD REVIEW	Turnover affects the quality of care; this measure is more straightforward to use than others	Keystone Research Center; https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#worker-super
National Nursing Assistant Survey (Management/ Supervision; Organizational Commitment/Job Satisfaction; Workplace Environment sections only)	Percent of respondents reporting perceptions of 10 items related to management/supervision; 29 related to organizational commitment/job satisfaction; 14 items in workplace environment.	STAFF INTERVIEW	Items are relevant and nursing home benchmarks are available; however, the items do not constitute a scale	Centers for Disease Control and Prevention; http://www.cdc.gov/nchs/data/nnhsd/2004NNASQuestionnaire.pdf
Percent of staff with flu vaccine	Not applicable	STAFF QUESTIONNAIRE	Staff health is critical to protect the health of residents	
Perception of Empowerment Instrument	15 items related to perceptions of autonomy (level of freedom and personal control), responsibility (psychological investment and commitment to job), and participation (influence in producing job outcomes and input on organizational goals and processes). Each is answered on a 5 point Likert scale, with higher scores indicating higher perception of empowerment.	STAFF QUESTIONNAIRE	It is important that staff feel empowered to respond to resident needs without always seeking supervision	Kirk Roller, Independent Consultant; https://www.nhqualitycampaign.org/files/PEI_Instrument.pdf

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Benjamin Rose Relationship with Supervisor Scale	11 items related to of nursing assistants' perceptions of relationships with their supervisors. Sample items include "listens carefully to my observations and opinions; respects by ability to observe and report clinical symptoms, ignores more input." Items are rated on a 3 point Likert scale in terms of frequency (hardly even/never, some of the time, most of the time). The total score ranges from 0-22; higher scores are favorable.	STAFF INTERVIEW	Positive relationships between direct care staff and supervisors are important to reduce turnover; items allow an in-depth understanding of the supervisory relationship	Benjamin Rose Institute; https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#worker-super
Charge Nurse Support Scale	15 items evaluating the supportive leadership behaviors (empathy and reliability toward staff) of charge nurses in long-term care settings. Sample items include "my charge nurse recognizes by ability to deliver quality care; tries to understand my point of view; keeps me informed of changes in the environment." Items are scored on a 5 point Likert scale, and summed (15-75); higher scores are more favorable.	STAFF QUESTIONNAIRE	Unique tool that assesses relationship with the charge nurse who provides hands-on care to residents	Toronto Rehabilitation Institute; Page 41
Job Role Quality Questionnaire	36 items answered on a 4 point Likert scale to address concerns about and rewards associated with one's job. Concern subscales include: overload, dead-end job, hazard exposure, supervision, discrimination; reward subscales include helping others, decision authority, challenge, supervisor support, recognition, satisfaction with salary. Lower scores on concern subscales reflect better job features; higher scores on reward subscales reflect better job features.	STAFF QUESTIONNAIRE	Despite the fact that this instrument has many items, it can be used for staff who work in different job categories	Wellesley College; https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#worker-super
Nursing Home Survey on Patient Safety (Modified for Assisted Living)	38 items based on the nursing home patient safety survey, which asks about resident safety issues such as related to staff interactions, communication, supervision, and care provision. Summary score range from 0-100 across 11 domains, with higher scores more favorable; the summary score is the percent of positive responses.	STAFF QUESTIONNAIRE	This measure was modified from the measure used in hospitals and nursing homes; patient safety is an important focus of the workforce	University of Pittsburgh; Pages 42-43
Direct Care Worker Job Satisfaction Scale	16 items assessing satisfaction with various aspects of a direct care worker's job. Sample items relate to recognition, job security, fringe benefits, supplies used, how complaints are handled, and opportunities for promotion. Items are scored on a 4 point Likert scale, with higher scores indicating higher job satisfaction.	STAFF INTERVIEW	Having a measure specific to satisfaction of direct care workers is important in assisted living	Benjamin Rose Institute; Page 44
Grief Support in Healthcare Scale	15 items that assess grief support for healthcare workers, assessing "recognition of the relationship," acknowledgement of the loss," and "inclusion of the griever." Responses given on 5 point Likert scale of 'strongly disagree' to 'strongly agree'. Responses are summed and higher scores reflect better grief-related support.	STAFF QUESTIONNAIRE	Death is common among assisted living residents, and it is important to provide support for staff during the dying and grief period	The Ohio State University; Page 45

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Job Satisfaction Subscale (Michigan Organizational Assessment Questionnaire, MOAQ)	3 items measuring job satisfaction: "all in all I am satisfied with my job, in general, I don't like my job, and in general, I like working here." Responses are scored on a Likert scale that can be 5, 8, or 7 points; scores are averaged after reverse scoring the negative item.	STAFF QUESTIONNAIRE	A short instrument to assess job satisfaction; provides an overall view of satisfaction, but requires follow-up with more discrete items	The University of Michigan; Page 46
Nurse-Nursing Assistant Caregiver Reciprocity Scale	16 items reflecting reciprocal ethical caregiving (e.g., team members respect each other), love and affection (e.g., I tell my patients I love them), and intrinsic rewards (e.g., I am willing to do all I can for my patients). Higher scores reflect higher perceived co-worker ethical caring.	STAFF QUESTIONNARE	Reciprocity among co-workers is important for positive work relationships	University of Massachusetts Lowell; http://blog.directcarealliance.org/wp-content/uploads/2013/09/Ameia-Yen-Pattons-reciprocal-ethical-caring-tool.pdf
Nursing Assistant Barriers Scale (NABS)	30 items assessing nurse aides (NAs) perceptions of barriers to effective job performance, addressing 6 subscales: Teamwork, Exclusion, Respect, Workload, Work Stress, and New NAs. Sample items include calling in at the last minute, handling residents with dementia, and rudeness and disrespect. A Likert scale is used and mean scores are derived within subscales.	STAFF QUESTIONNAIRE	Understanding the specific barriers to effective job performance can help guide quality improvement efforts	University of Alabama; Page 47
Quality of Employment Survey (quantitative workload scale)	4 items answered on 5 point Likert scale to assess perceptions of staff workload. Higher scores indicate higher workload and have been associated with lower satisfaction.	STAFF INTERVIEW	A short instrument that can be used to assess attitudes of different categories of workers	University of Michigan; https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Shortell Organization and Management Survey, Nursing Home Adaptation – Communication and Leadership Subscales	19 items rated on a 5 point Likert scale that address 5 subscales of communication and leadership. Subscales include connectedness, timeliness and understanding, organizational harmony, clinical leadership, and perceived effectiveness. Higher scores indicate better perceived communication (or leadership).	STAFF INTERVIEW	Communication and leadership are important characteristics for an effective leader	University of Missouri – Columbia; Page 48
Maslach Burnout Inventory	22 items about attitudes and personal feelings that assess three aspects of burnout: emotional exhaustion (being emotionally overextended and exhausted by work), depersonalization (unfeeling and impersonal response toward the recipients of service), and lack of personal accomplishment (incompetence and lack of achievement). Items are rated on a 7 point Likert scale ranging from never to every day.	STAFF QUESTIONNAIRE	A widely used measure of burnout that taps into outcomes of work-related stress	University of California- Berkley; Page 49

Name	Description	Source of Information, Process to Obtain	Comments	Developer, Resource
Nursing Home Administrator Job Satisfaction Scale (NHA-JQ)	27 items assessing job satisfaction of nursing home administrators in 7 domains: coworkers, work demands, work content, workload, work skills, rewards, and intent to leave. Sample items rate cooperation among staff, closeness to residents and families, and thinking about quitting. Items other than intent are scored 1-10, and intent to leave is scored 1-5.	STAFF QUESTIONNAIRE	An administrator's/executive director's satisfaction affects staff job performance and can impact resident well-being	University of Pittsburgh; Pages 50-51
Workplace Violence Tool	4 items regarding having been spit on, bitten, hit or pushed. Each item is scored yes/no, and higher scores indicate more violence.	STAFF QUESTIONNAIRE	A short tool that assesses a common staff experience	University College of Cariboo; Page 52
Intent to Turnover Measure (Michigan Organizational Assessment Questionnaire, MOAQ)	3 items assessing intent to turnover: (a) I will probably look for a new job in the next year; (2) I often think about quitting; and (3) How likely is it that you could find a job with another employer with about the same pay and benefits you now have? Each item is scored on a 3 point Likert scale and ratings are averaged to create the final score.	STAFF QUESTIONNAIRE	A short tool that may suggest the presence of underlying problems before a worker quits his/her job	University of Michigan; https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes
Percent of licensed pharmacists with geriatric certification	Not applicable	RECORD REVIEW	Staff/contract workers with relevant training have the capacity to provide better care	
Percent of physical therapists with geriatric certification	Not applicable	RECORD REVIEW	Staff/contract workers with relevant training have the capacity to provide better care	
Percent of physicians with geriatric certification	Not applicable	RECORD REVIEW	Staff/contract workers with relevant training have the capacity to provide better care	
Percent of RNs + LPNs with geriatric certification	Not applicable	RECORD REVIEW	Staff/contract workers with relevant training have the capacity to provide better care	
Percent of social workers with a major in aging or geriatric social work	Not applicable	RECORD REVIEW	Staff/contract workers with relevant training have the capacity to provide better care	
Percent of staff supplied by agency	Not applicable	RECORD REVIEW	Consistent assignment is important for person-centered care	
RNs on unit	Not applicable	RECORD REVIEW	Having at least one RN available around the clock is advisable; is not necessary to be consistently on the unit	
RNs/LPNs (ratio)	Not applicable	RECORD REVIEW	Having an RN in addition to LPNs is advantageous	

6. CONCLUSIONS AND INDICATIONS FOR ADDITIONAL TOOL DEVELOPMENT

This scan uncovered a large number of tools that are potentially useful for quality improvement in assisted living – 254 in total. Some of the tools assess similar topics (e.g., there are numerous measures of satisfaction and staffing), and some tools are better than others in terms of the quality of the information they provide.

A critical review that considered utility for assisted living, similarity of topics, and measurement quality resulted in a recommendation of 96 tools for quality improvement: 6 related to person-centered care, 10 related to medication management, 17 related to care coordination/ transitions, 35 related to resident/patient outcomes, and 28 related to workforce. There is some redundancy among the 96 tools, allowing users to consider which best meets their purpose and setting.

When selecting tools, their full utility may best be realized by using two or more in combination. For example, it does little good to assess pain if practices are not also in place to manage pain and assess the success of pain management. Similarly, it does little good to monitor the percent of residents discharged to home or other settings without also putting a transition plan in place. Therefore, quality improvement efforts may be most effective if combinations of tools are used to assess resident need, care provision, and outcomes.

Because this scan sought tools that have been used in assisted living and other health and long-term care settings, it is to be expected that in some instances, modifications may be indicated in terms of wording or of the items themselves; that said, however, such modifications seem to be minor and obvious – such as omitting the word "hospice" from the measure that derives the "percent of hospice residents screened for pain during admission assessment."

Indications for Additional Tool Development. Despite the 254 tools identified in this effort, and the very many that relate to workforce (107 in total), none are suitable to assess the sufficiency of staffing in assisted living. That is, calculating the number or percent of direct care workers, registered nurses, and licensed nurses is of little utility when resident need and acuity is as variable as it is among assisted living residents and across communities. In nursing homes, resident acuity is determined according to standardized Resource Utilization Groups, and this indicator can be used to determine staffing needs. No such indicators exist for assisted living, making it challenging to determine whether staffing is adequate to meet resident needs. Ideally, a simple metric of resident acuity could be developed for this purpose.

A second area that could benefit from additional tool development is an overall measure of quality, akin to the Five-Star Quality Rating System used in nursing homes. There has already been discussion of the benefit of public reporting for assisted living,[25] and this too is an area awaiting future measurement development.

7. REFERENCES AND ENDNOTES

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[23] Reliability refers to the extent to which a tool is scored the same over two administrations (test-retest) and by two raters (inter-rater), and to which the items reflect similar concepts (internal consistency).

[24] Validity refers to how well a tool compares with similar tools (convergent), differs from tools measuring different concepts (discriminant), predicts a future event theoretically related to the construct (predictive), and distinguishes between groups that should score differently (concurrent).

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Table 1. Measures and Instruments, Listed Alphabetically (n=254)

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Activities of Daily Living Unmet Need	Receipt of assistance (hand-on or supervisory/standby) for difficulty performing any of seven activities of daily living due to a health or physical problem: (a) bathing or showering; (b) dressing; (c) eating; (d) getting in and out of bed or chairs (i.e., transferring); I walking; (f) getting outside; and (g) using the toilet, including getting to the toilet. No or insufficient assistance indicates unmet need.	RES	OUTCOME	INSTRUMENT	14	CHART RESIDENT	ABSTRACT INTERVIEW	8
Adverse Reactions to Care Scale	8 observational items meant to assess triggers during transitions in care in the context of adverse reactions to care activities (bathing, toileting, taking medications, care from health care professionals) and to care environments (being alone, being around strangers, loud noises, darkness/bright lighting). Each is asked in relation to how often difficult or bad reactions are experienced for each, using a 4 point Likert scale of frequency.	TRANS	OUTCOME	INSTRUMENT	8	FAMILY	OBSERVATION	3
Alzheimer's Disease Related Quality of Life (ADRQL)	40 item research instrument used to assess health-related quality of life in persons with Alzheimer's disease and other dementias. Domains include social interaction (12 items), awareness of self (8 items), feelings and mood (12 items), enjoyment of activities (4 items) and response to surroundings (4 items). Each item is scored agree/disagree and a total is converted ranging up to 100 points. A shorter revised form is recommended.	RES	OUTCOME	INSTRUMENT	40	FAMILY	INTERVIEW	8
Annual Short Turnover Survey for North Carolina Department of Health and Human Services' Office of Long Term Care	The sum of full time and part time voluntary and involuntary terminations / number needed to be completely staffed by full time and part time staff; can create separate scores for voluntary and involuntary.	WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Artifacts of Culture Change	79 items reflecting structures and processes of care in six areas (care practices, environment, family/community, leadership, workplace practice, outcomes). Items receive scores based on cut points assigned for each item. The total number of points available is 580.	PCC	PROCESS	INSTRUMENT	79	STAFF	ABSTRACT OBSERVATION	5
Assisted Living Environmental Quality Scale (AL-EQS)	A summary scale comprised of 15 items from the TESS-NH/RC, reflecting facility maintenance, cleanliness, safety, lighting, physical appearance/homelikeness, orientation/cueing, privacy, resident appearance, and noise. Each of the 15 components is scored 0-2, with higher scores indicating better environmental quality. The composite ALEQS measure is a sum of the 15 components, which thus range from 0-30.	PCC	STRUCTURE	INSTRUMENT	15	OTHER	OBSERVATION	6
Assisted Living Resident Satisfaction Scale (ALRSS)	18 items assessing satisfaction in 9 areas: safety/peace of mind, personal attention, staff, knowledge, autonomy, aides, socialization with family, privacy, and activities. Items are scored on a 4 point Likert scale. A family version also exists, which included 18 items assessing satisfaction in five areas: staff responsiveness, transportation, activities, family member impact, and resident responsibilities.	RES	OUTCOME	INSTRUMENT	18	RESIDENT FAMILY	QUESTIONNAIRE	8
Assisted Living Social Activity Scale (AL-SAS)	11 items reflecting participation in activities (yes/no) during the past week. Items reflect three factors of social activity participation: private activities (writing letters, reading, working on a hobby, talking on the telephone), group activities (arts and crafts, playing cards/bingo/games, attending religious services, going to the movies), and outings (to eat/drink, shopping/browsing, for walks). Scores can be examined as individual items or by subgroup.	RES	OUTCOME	INSTRUMENT	11	STAFF	INTERVIEW	4
Avoidable Rehospitalization Rate, 30-day Adjusted (and annualized)	The number of unplanned readmissions to any hospital divided by the number of hospitalizations in that period, adjusted for patient characteristics.	TRANS	OUTCOME	MEASURE		CHART	ABSTRACT	5

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Benjamin Rose Nurse Assistant Job Satisfaction Scale	18 items measuring satisfaction in five subscales: communication and recognition, amount of time to do work, available resources, teamwork, management practices. Sample items relate to the working conditions, the teamwork between staff, the recognition received for work, and the amount of time available to do work. Items are scored on a 4 point Likert scale, ranging from very satisfied to very dissatisfied; higher scores are favorable.	WORK	OUTCOME	INSTRUMENT	18	STAFF	INTERVIEW	6
Benjamin Rose Relationship with Supervisor Scale	11-item measure of nursing assistants' perceptions of relationships with their supervisors. Sample items include "listens carefully to my observations and opinions; respects by ability to observe and report clinical symptoms, ignores more input." Items are rated on a 3 point Likert scale in terms of frequency (hardly even/never, some of the time, most of the time). The total score ranges from 0-22; higher scores are favorable.	WORK	PROCESS	INSTRUMENT	11	STAFF	INTERVIEW	8
CAHPS Nursing Home Resident Survey: Discharged Resident Instrument	Proportion of discharged residents who highly rated nursing home services such as meals, temperature, cleanliness, feelings of security, pain treatment, staff, therapy, noise, privacy, choice, activities, and others.	RES	OUTCOME	MEASURE		RESIDENT	QUESTIONNAIRE	7.5
Care Transitions Measure (CTM-15 and CTM-3)	15 items assessing care transitions in relation to goals, potential health care needs, site of care, information, understanding, warning signs and symptoms, written plan of care, self-care, confidence, and purpose, side effects, and administration of medications. Items are scored on a 4 point Likert scale. A 3 item version is available and recommended for public reporting.	TRANS	OUTCOME	INSTRUMENT	15	RESIDENT	INTERVIEW	8
Charge Nurse Support Scale	15 items evaluating the supportive leadership behaviors (empathy and reliability toward staff) of charge nurses in long-term care settings. Sample items include "my charge nurse recognizes by ability to deliver quality care; tries to understand my point of view; keeps me informed of changes in the environment). Items are scored on a 5 point Likert scale, and summed (15-75); higher scores are more favorable.	WORK	PROCESS	INSTRUMENT	15	STAFF	QUESTIONNAIRE	8
Commonwealth Culture Change Survey	33 multi-part questions that assess three domains of culture change in nursing homes. These domains include resident care, staff culture, and working environment. Each item reported as a percent of all nursing home reporting various practices.	PCC	PROCESS	MEASURE		STAFF	QUESTIONNAIRE	5
Conditions for Work Effectiveness Questionnaire (CWEQ-II short form)	12 items measuring four empowerment dimensions: perceived access to opportunity (e.g., possibility for growth and movement), support (e.g., receiving feedback and guidance), information (e.g., having formal and informal knowledge), and resources (e.g., materials) in an individual's work setting. Additional items assess formal and informal power. Responses are provided on a 5 point Likert scale.	WORK	PROCESS	INSTRUMENT	12	STAFF	QUESTIONNAIRE	8
Consistent Assignment Tracking Tool (Advancing Excellence)	Tracks the number of caregivers each resident has for the month and calculates the percent of residents meeting a nursing homes target number.	WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	10
Control, Autonomy, Self-realization, Pleasure-19 (CASP-19)	19 items assessing quality-of-life in 4 area: control, autonomy, pleasure and self-realization. Sample items include "my age prevents me from doing the things I would like to do; I feel left out of things; I look forward to each day." Items are scored on a 4 point Likert scale, totaling 0–57, with higher scores representing better quality of life. The shorter CASP-12 is recommended because it has better psychometric properties, but even that requires further modification and testing.	RES	OUTCOME	INSTRUMENT	19	RESIDENT	QUESTIONNAIRE	6
Core Nurse Resource Scale (CNRS)	Measures staff assessment of the relevance of core resources (physical, psychological and social) of the environment, including workplaces at risk of disengaged (low work engagement) nursing staff. Responses on 4 point scale of not relevant to very relevant.	WORK	PROCESS	INSTRUMENT	18	STAFF	QUESTIONNAIRE	8

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
CORE-Q	4 satisfaction questions: (1) In recommending this facility to your friends and family, how would you rate it overall? (2) Overall, how would you rate the staff? (3) How would you rate the care you receive? (4) Overall, how would you rate the food?	RES	OUTCOME	INSTRUMENT	4	RESIDENT	INTERVIEW	9
Culture Change Scale (CCS)	48 items assessing six sub-scales: 1) system-wide culture change; 2) resident choice; 3) organizational design; 4) empowering supervision; 5) job design; and 6) decision-making. Sample items include "the environment of this facility encourages new ideas; how often can residents eat what they really want; my job duties allow me to enough time to do my job properly." Scores are provided on a 5 point Likert scale and mean scores are derived.	PCC	PROCESS	INSTRUMENT	48	STAFF	INTERVIEW	8
Decision Satisfaction Inventory (DSI)	15 items assessing satisfaction with medical decision-making in two domains: the process and the decision. Items related to the process include the degree to which family felt involved, the support and reassurance provided by health care professionals, the amount of information received, and the level of interest, attention and time spent by the health care professional. Responses are provided on a 5 point Likert scale. The total and subscale scores reflect the summation of items transformed onto a scale from 0–100 with higher scores reflecting greater satisfaction.	TRANS	OUTCOME	INSTRUMENT	15	FAMILY	INTERVIEW	8
Dementia Care Mapping	26 observational recordings related to care and quality life for people with dementia. Standard use involves observation for 6 continuous hours of 5-8 people; every five minutes, two codes are recorded reflecting resident behavior and well/ill being; percent assigned to each category are determined. The measure assesses outcomes and processes of care; variations of the observational protocol have been suggested.	RES	OUTCOME	INSTRUMENT	26	OTHER	OBSERVATION	4
Dementia Quality of Life Instrument (DQOL)	29 items assessing 5 subscales meant to assess the subjective experience of dementia: self-esteem, positive affect/humor, negative affect, feelings of belonging, and sense of aesthetics. Sample items ask about feelings of confidence, happiness, frustration, being useful, and enjoying music. Each item is scored on a 4 point Likert scale, and scores are computed by averaging responses to the items that comprise that subscale.	RES	OUTCOME	INSTRUMENT	29	RESIDENT	INTERVIEW	7
Direct Care Worker Job Satisfaction Scale	16 items assessing satisfaction with various aspects of a direct care worker's job. Sample items relate to recognition, job security, fringe benefits, supplies used, how complaints are handled, and opportunities for promotion. Scored on a 4 point Likert scale, and higher scores indicate higher job satisfaction.	WORK	OUTCOME	INSTRUMENT	16	STAFF	INTERVIEW	7
Duncan Choice Index	29 items rating the amount of choice regarding what, when, where, how, and with whom leisure and self-care activities are performed. Items are rated on a Likert scale of 1 (never a choice) to 5 (always a choice), a mean score is derived. Sample items include "what I wear, how I dress, when I use the telephone, whom I eat with, when I take medication, and when I eat.	PCC	PROCESS	INSTRUMENT	29	RESIDENT	QUESTIONNAIRE	7
Eaton Instrument for Measuring Turnover	Number of new employees (full or part time) divided by the number of employees in that category over a 12-month period.	WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	10
Emergency Department Visit per 'X' resident days		TRANS	OUTCOME	MEASURE		CHART	ABSTRACT	2.5
End of Life in Dementia – Comfort Assessment in Dying (EOLD-CAD)	14 items assessing symptoms and comfort during the last week of life, with subscales related to physical distress, emotional distress, well-being, and dying symptoms. Scores use a 3 point Likert scale and range from 14-42, with higher scores indicating better symptom control.	RES	OUTCOME	INSTRUMENT	14	FAMILY	INTERVIEW QUESTIONNAIRE	7

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
End of Life in Dementia – Symptom Management	9 items assessing the frequency of symptoms and signs during the past 90 days: pain, shortness of breath, depression, fear, anxiety, agitation, calm, skin breakdown, resistance to care. Scores use a 6 point Likert scale ranging from 0-5; scores are summed and range from 0-45 with higher scores indicating better symptom control.	RES	OUTCOME	INSTRUMENT	9	FAMILY	INTERVIEW QUESTIONNAIRE	6
Ethics Environment Questionnaire (EEQ)	20 items assessing opinions of health-care providers about ethics in their clinical practice organizations. Items assess 5 areas: relationships of nurses with peers, patients, managers, hospital, and physicians. Items use a 5 point Likert scale and are summed and averaged to obtain an overall score.	WORK	PROCESS	INSTRUMENT	20	STAFF	QUESTIONNAIRE	7
Experience of Home Scale	25 items designed to measure the strength of the experience of a meaningful person-environment transaction. Items assess home (e.g., connected to people I love here), not home (e.g., cold and sterile), and boundary (e.g., have privacy). Responses use a 5 point Likert scale of strongly agree to strongly disagree, and the total score is the mean of all items.	PCC	OUTCOME	INSTRUMENT	25	RESIDENT	QUESTIONNAIRE	7
Falls per 'X' resident days		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Falls With Death per 'X' resident days		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Falls With Major Injury per 'X' resident days		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Falls With Minor Injury per 'X' resident days		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Falls With Moderate Injury per 'X' resident days		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Family Perception of Physician-Family Caregiver Communication (FPPFC)	7 items assessing family perceptions of communication between physicians and family caregivers of individuals who spent their last month of life in long-term care. Sample items include "the doctor always spoke to you, other family caregivers, or the resident about [his/her] wishes for medical treatment at the end of life, and the doctor always kept you or other family caregivers informed about the resident's condition. Items are scored on a 4 point Likert scale and a mean score is derived.	TRANS	PROCESS	INSTRUMENT	7	FAMILY	INTERVIEW	6
Generic Job Satisfaction Scale	10 item scale of job satisfaction that can be used in a range of occupations. Items address recognition, feeling close to others at work and good about working, feeling secure, believing management cares and work is good for health, that wages are good, that talents and skills are used at work, that relations with the supervisor are good, and feeling good about the job. Scoring is on a 5 point Likert scale, with higher scores reflecting more satisfaction.	WORK	OUTCOME	INSTRUMENT	10	STAFF	QUESTIONNAIRE	5
Grau Job Satisfaction Scale	17 items assessing intrinsic job satisfaction and satisfaction with job benefits; sample items include the extent to which the following statements are true: can see results of work, sense of accomplishment, get to do a variety of things, have enough authority (intrinsic) and fringe benefits, security, pay, and chances for promotion are good (benefits). Items are rated on a 4 point Likert scale and summed.	WORK	OUTCOME	INSTRUMENT	17	STAFF	QUESTIONNAIRE	5
Greater Cincinnati Chapter Well-Being Observation Tool	Observation of 19 indicators of 7 domains of well-being: interest, sustained attention, pleasure, negative affect, sadness, self-esteem, normalcy. Observers assign codes from 0 = never demonstrated to 4=always demonstrated, as observed s in a 10 minute period.	RES	OUTCOME	INSTRUMENT	19	RESIDENT	OBSERVATION	1

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Grief Support in Healthcare Scale	15 items that assess grief support for healthcare workers, assessing "recognition of the relationship," acknowledgement of the loss," and "inclusion of the griever." Responses given on 5 point Likert scale of 'strongly disagree' to 'strongly agree'. Responses are summed and higher scores reflect better grief-related support.	WORK	PROCESS	INSTRUMENT	15	STAFF	QUESTIONNAIRE	7
Home Health or One-on-One Care per 'X' resident days		WORK	STRUCTURE	MEASURE		CHART	ABSTRACT	2.5
Hospice Quality of Life Index	25 satisfaction items related to physical well-being (e.g., pain relief), psychological-spiritual well-being (e.g., anxiety about self), social well-being (e.g., physical contact with others), and financial well-being (e.g., worry about cost of care). Each item has 0-100 points, and is weighted by its perceived importance on a 0-3 scale; each score can thus range between 0-300.	RES	OUTCOME	INSTRUMENT	25	RESIDENT	INTERVIEW	6
Hospitalizations per 'X' resident days		TRANS	OUTCOME	MEASURE		CHART	ABSTRACT	2.5
Intent to Turnover Measure (Michigan Organizational Assessment Questionnaire, MOAQ)	3 items assessing intent to turnover: (a) I will probably look for a new job in the next year; (2) I often think about quitting; and (3) How likely is it that you could find a job with another employer with about the same pay and benefits you now have? Each item is scored on a 3 point Likert scale and ratings are averaged to create the final score.	WORK	OUTCOME	INSTRUMENT	3	STAFF	QUESTIONNAIRE	5
Interaction Behavior Measure	Observational measure of 12 verbal and non-verbal caregiver behaviors (e.g., personal attending, relaxed, social touch, smiles); each is scored on a 7 point scale anchored by dimension-defining terms (e.g., for personal attending, the anchor are brief and lengthy).	PCC	PROCESS	INSTRUMENT	12	OTHER	OBSERVATION	5
Job Attitude Scale	17 items assessing attitudes regarding pay, interaction/organizational factors, task requirements, job status, and autonomy. Sample items include "I am supervised more closely than necessary," "I am sometimes frustrated because my tasks seem programmed," and "I have sufficient time for direct resident care." Items scored on 5 point Likert scale, and higher scores indicate more satisfaction.	WORK	PROCESS	INSTRUMENT	17	STAFF	QUESTIONNAIRE	6
Job Characteristics Scales of the Job Diagnostic Survey	15 items answered on a 7 point Likert scale to measure perceived job characteristics. Subscales address skill variety, task significance, autonomy, task identity, and feedback and scores correlate with absenteeism and job satisfaction.	WORK	PROCESS	INSTRUMENT	15	STAFF	QUESTIONNAIRE	7
Job Descriptive Index	54 questions that capture 6 domains describing the nature of job (attitude toward job; 11 items); opportunities and promotions (13 items); supervising (6 items); co-workers (10 items); benefits and salary (7 items); conditions of workplace (7 items). Scoring uses a 4 point Likert scale ranging from completely disagree to completely agree.	WORK	PROCESS	INSTRUMENT	54	STAFF	QUESTIONNAIRE	6
Job Role Quality Questionnaire	36 items answered on a 4 point Likert scale to address concerns about and rewards associated with one's job. Concern subscales include: overload, dead-end job, hazard exposure, supervision, discrimination; reward subscales include helping others, decision authority, challenge, supervisor support, recognition, satisfaction with salary. Lower scores on concern subscales reflect better job features; higher scores on reward subscales reflect better job features.	WORK	PROCESS	INSTRUMENT	36	STAFF	INTERVIEW QUESTIONNAIRE	8
Job Satisfaction	6 job satisfaction items assessing workplace morale, challenging work, benefits, salary or wages, learning new skills, and overall satisfaction. Items measured on a 4 point Likert scale from strongly agree to strongly disagree.	WORK	OUTCOME	INSTRUMENT	6	STAFF	QUESTIONNAIRE	6

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Job Satisfaction Subscale (Michigan Organizational Assessment Questionnaire, MOAQ)	3 items measuring job satisfaction: "all in all I am satisfied with my job, in general, I don't like my job, and in general, I like working here." Responses are scored on a Likert scale that can be 5, 8, or 7 points; scores are averaged after reverse scoring the negative item.	WORK	OUTCOME	INSTRUMENT	3	STAFF	QUESTIONNAIRE	7
Job Satisfaction, Overall	1 item reflecting job satisfaction: "Overall, how satisfied are you with your job?" The item is scored on a 5 point Likert scale from 'very satisfied' to 'very dissatisfied'.	WORK	OUTCOME	INSTRUMENT	1	STAFF	QUESTIONNAIRE	4
LEAP Leadership Behaviors and Organizational Climate Survey (leadership behaviors scale)	10 items answered on 5 point Likert scale to assess perceptions of leadership behaviors in terms of informing, consulting/delegating, planning/organizing, problem solving, role clarifying, monitoring operations, motivating, rewarding, mentoring, and managing conflict. Scores range from 0-50 and higher scores reflect better perceptions.	WORK	PROCESS	INSTRUMENT	10	STAFF	QUESTIONNAIRE	8
LEAP Leadership Behaviors and Organizational Climate Survey (organizational climate scale)	10 items answered on 5 point Likert scale to assess perceptions of organizational climate in terms of communication flow, human resources, motivational conditions, and decision-making practices. Scores range from 4-20 and higher scores reflect better perceptions of organizational climate.	WORK	PROCESS	INSTRUMENT	4	STAFF	QUESTIONNAIRE	7
LPN + NA Direct Care Time per resident day		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	7.5
LPN Cost per resident		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
LPN FTE (Full Time Equivalent)		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
LPN FTE (Full Time Equivalent) per 100 beds		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
LPN FTE (Full Time Equivalent) per 100 resident days		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
LPN FTE (Full Time Equivalent) per 100 residents		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
LPN Hours per bed		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
LPN Hours per resident day		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	7.5
Lubben Social Network Scale – 18 item version	18 items measuring perceived social support received from family, friends, and neighbors (size, closeness, and frequency of contacts of a social network); the measure distinguishes between kin and non-kin. Each item is rated on Likert scale of 0-5, and a sum is derived (0-90) with higher scores indicating a stronger social network. This 18 item version is appropriate for social and health science research.	PCC	PROCESS	INSTRUMENT	18	RESIDENT	QUESTIONNAIRE	3
Lubben Social Network Scale – 6 item version	6 items measuring perceived social support received from family, friends, and neighbors (size, closeness, and frequency of contacts of a social network); the measure distinguishes between kin and non-kin. Each item is rated on Likert scale of 0-5, and a sum is derived (0-30) with higher scores indicating a stronger social network. This 6 item version was developed to meet clinician's needs for brevity.	PCC	PROCESS	INSTRUMENT	6	RESIDENT	QUESTIONNAIRE	6

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Lubben Social Network Scale – Revised Version	12 items measuring perceived social support received from family, friends, and neighbors (size, closeness, and frequency of contacts of a social network); the measure distinguishes between kin and non-kin. Each item is rated on Likert scale of 0-5, and a sum is derived (0-60) with higher scores indicating a stronger social network.	PCC	PROCESS	INSTRUMENT	12	RESIDENT	QUESTIONNAIRE	3
Maslach Burnout Inventory	22 items about attitudes and personal feelings that assess three aspects of burnout: emotional exhaustion (being emotionally overextended and exhausted by work), depersonalization (unfeeling and impersonal response toward the recipients of service), and lack of personal accomplishment (incompetence and lack of achievement). Items are rated on a 7 point Likert scale ranging from never to every day.	WORK	OUTCOME	INSTRUMENT	22	STAFF	QUESTIONNAIRE	6
Measurement Tool for Clinical Practice Guideline Implementation: Measures for Falls and Fall Risk	Rates of clinical and clinical outcome measures related to falls that address domains of falls recognition, assessment, treatment, monitoring, and outcomes.	RES	PROCESS	MEASURE		CHART	ABSTRACT	7.5
Medical Specialist Visits per 'X' resident days		WORK	STRUCTURE	MEASURE		CHART	ABSTRACT	2.5
Medication Administration Practices (MAP)	48 items reflecting knowledge related to infection control, medication monitoring, medication regulation/documentation, medication administration, technique of administration, terminology, and charting and documentation. Higher scores indicate more knowledge.	MED	PROCESS	INSTRUMENT	48	STAFF	QUESTIONNAIRE	7
Medication Appropriateness Index	10 items rated 1 (indicated) to 3 (not indicated), related to each medication being taken: medication indication, effectiveness, dosage, directions, drug-drug interactions, drug-disease interactions, practicality, duplication, expense, and treatment duration. Generally used to flag problems, but a score can be created from 0 (no item inappropriate) to 30 (all items inappropriate).	MED	PROCESS	INSTRUMENT	10	CHART	ABSTRACT	5
Medication Quantification Scale	Quantifies medication use for people with chronic, nonmalignant pain. Scores are calculated for each medication based on weights to medication class and to dosage level, and are summed to provide a score. Medication class weights are aspirin=1, NSAID=2, antidepressant=2, muscle relaxant=3, benzodiazepines=4, weak narcotics=4; barbiturates/sedative=5, strong narcotics=6. Each is then multiplied by a dosage weight, and scores are added.	MED	PROCESS	INSTRUMENT		CHART	ABSTRACT	7
Medication Reconciliation	Number of medication records reconciled of those admitted, transferred, or discharged divided by total number in that category.	MED	PROCESS	MEASURE		CHART	ABSTRACT	10
Medication Tracking Tool (Advancing Excellence)	Six rates related to antipsychotic use in nursing home. Rate of residents on PRNs, for those with dementia, more than one antipsychotic, GDR attempted, GDR with dose reduction, GDR with med discontinued.	MED	PROCESS	MEASURE		CHART	ABSTRACT	10
Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation	Percent of time staff performs medication reconciliation at admission and clinical handoffs.	MED	PROCESS	MEASURE		CHART	ABSTRACT	10
Menorah Park Engagement Scale – Brief Form	Observes engagement in a 10 minute period in terms of participated in target activity, did/commented on the activity (constructive engagement), listened/watched target activity (passive engagement), did or attended to things other than target activity (other/self-engagement), and slept/kept eyes closed/stared into space (non-engagement). Scoring relates to the highest level of engagement observed.	RES	OUTCOME	INSTRUMENT	1	RESIDENT	OBSERVATION	2

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Minnesota Satisfaction Questionnaire	20 items regarding the degree to which vocational needs and values are satisfied on a job; it assesses intrinsic and extrinsic job satisfaction (two subscales) and also general job satisfaction. Sample items relate to achievement, compensation, coworkers, creativity, and recognition. The items are scored on a 5 point Likert scale ranging from very satisfied to very dissatisfied.	WORK	OUTCOME	INSTRUMENT	20	STAFF	QUESTIONNAIRE	5
Mobility Tracking Tool (Advancing Excellence)	Calculates several outcomes based on MDS items. A set of eight mobility items is used to construct two composite scores for each resident: Personal Movement Score, and Life Space Mobility Score. Tracks the percent of residents assessed and percent of those with stable or improved mobility.	RES	OUTCOME	MEASURE		CHART	ABSTRACT	7.5
Mortality rate		RES	OUTCOME	MEASURE		CHART	ABSTRACT	2.5
NA FTE (Full Time Equivalent)		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
NA FTE (Full Time Equivalent) per 100 beds		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
NA FTE (Full Time Equivalent) per 100 resident days		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
NA FTE (Full Time Equivalent) per 100 residents		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
NA Hours per bed		WORK	STRUCTURE	MEASURE		RECORDS	QUESTIONNAIRE	7.5
NA Hours per resident day		WORK	STRUCTURE	MEASURE		RECORDS	QUESTIONNAIRE	7.5
NA Per Nursing Staff (RN+LPN)		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
National Nursing Assistant Survey (Management/ Supervision; Organizational Commitment/Job Satisfaction; Workplace Environment only)	Percent of respondents reporting perceptions of 10 items related to management/supervision; 29 related to organizational commitment/job satisfaction; 14 items in workplace environment.	WORK	PROCESS	MEASURE		STAFF	INTERVIEW	10
Number of Hospital days		TRANS	OUTCOME	MEASURE		CHART	ABSTRACT	5
Number of Hospital Transfers		TRANS	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Number of Non-Prescription Medications		MED	PROCESS	MEASURE		CHART	ABSTRACT	5
Number of Prescription Medications		MED	PROCESS	MEASURE		CHART	ABSTRACT	5
Numeric Rating Scale for Pain	1 item measure of pain intensity in adults. The intensity of pain is scored using a 0-10 rating scale anchored by terms describing pain intensity. A rating is given for the intensity of pain experienced in the last 24 hours.	RES	OUTCOME	INSTRUMENT	1	RESIDENT	QUESTIONNAIRE	7

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Nurse-Nursing Assistant Caregiver Reciprocity Scale	16 items reflecting reciprocal ethical caregiving (e.g., team members respect each other), love and affection (e.g., I tell my patients I love them), and intrinsic rewards (e.g., I am willing to do all I can for my patients). Higher scores reflect higher perceived co-worker ethical caring.	WORK	PROCESS	INSTRUMENT	16	STAFF	QUESTIONNAIRE	7
Nursing Assistant Barriers Scale (NABS)	30 items assessing nurse aides (NAs) perceptions of barriers to effective job performance, addressing 6 subscales: Teamwork, Exclusion, Respect, Workload, Work Stress, and New NAs. Sample items include calling in at the last minute, handling residents with dementia, and rudeness and disrespect. A Likert scale is used and mean scores are derived within subscales.	WORK	OUTCOME	INSTRUMENT	30	STAFF	QUESTIONNAIRE	7
Nursing Facility Family Satisfaction Questionnaire	20 items assessing satisfaction related to admission, activities, autonomy and privacy, physical environment, safety and security, caregivers, meals/food, and general satisfaction. Sample items include "whether your family member has enough things to do, enough privacy, and how safe the family member feels." Items are rated 0-10, ranging from very poor to excellent.	RES	OUTCOME	INSTRUMENT	20	FAMILY	QUESTIONNAIRE	6
Nursing Home Administrator Job Satisfaction Scale (NHA-JQ)	27 items assessing job satisfaction of nursing home administrators in 7 domains: coworkers, work demands, work content, workload, work skills, rewards, and intent to leave. Sample items rate cooperation among staff, closeness to residents and families, and thinking about quitting. Items other than intent are scored 1-10, and intent to leave is scored 1-5.	WORK	OUTCOME	INSTRUMENT	27	STAFF	QUESTIONNAIRE	6
Nursing Home Certified Nurse Assistant Job Satisfaction Questionnaire (NH-CNA-JSQ)	19 items assessing nursing home nursing assistant (NA) job satisfaction in 7 areas: coworkers, work demands, work content, workload, training, rewards, and quality of care. Sample items include rating cooperation among staff; closeness to residents and families, work schedule, work skills, and care given to residents. Items are scored on a 10 point Likert scale ranging from very poor to excellent.	WORK	OUTCOME	INSTRUMENT	19	STAFF	QUESTIONNAIRE	6
Nursing Home Compare (MDS) Percent of Residents Who Self-Report Moderate to Severe Pain (long- and short-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Five Star Quality Rating System of Staffing Levels	Case-mix adjusted measures of (1) RN hours per resident day, and (2) total staffing hours (RN+ LPN + NA) hours per resident day. Adjustment based on distribution of MDS 3.0 assessments by RUG-III group.	WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Nursing Home Compare Percent of High Risk Residents With Pressure Ulcers (long- and short-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Low Risk Residents Who Lose Control of Their Bowels or Bladder (long-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (long- and short-stay)		RES	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	10

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (long- and short-stay)		RES	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Experiencing One or More Falls With Major Injury (long-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Receiving Antipsychotic Medication (long-stay)		MED	PROCESS	MEASURE		CHART	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Are Newly Administered Antipsychotic Medications (short-stay)		MED	PROCESS	MEASURE		CHART	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Have Depressive Symptoms (long-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder (long-stay)		RES	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Lost Too Much Weight (long-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Were Physically Restrained (long-stay)		RES	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Whose Need for Help With ADLs Has Increased (long-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents With a Urinary Tract Infection (long-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents With Pressure Ulcers that are New or Worsened (short-stay)		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Nursing Home Nurse Aide Job Satisfaction Questionnaire	22 items assessing seven areas: coworkers (relations with other workers); work demands (resources and demands of the job); work content (complexity and challenges of the work); work load (time pressures); training (preparation for the position); rewards (benefits of the job); and quality of care (how well NAs perceive residents are cared for). In addition, two global job satisfaction questions are included. Responses provided on 10 point Likert scale.	WORK	OUTCOME	INSTRUMENT	22	STAFF	QUESTIONNAIRE	4
Nursing Home Survey on Patient Safety (Modified for Assisted Living)	38 items based on the nursing home patient safety survey, which asks about resident safety issues such as related to staff interactions, communication, supervision, and care provision. Summary score range from 0-100 across 11 domains, with higher scores more favorable; the summary score is the percent of positive responses.	WORK	PROCESS	INSTRUMENT	38	STAFF	QUESTIONNAIRE	8
Nursing Home Survey on Resident Safety Culture (AHRQ)	44 items scored on a 5 point Likert scale assessing the safety climate in a nursing home, with questions addressing teamwork, staffing adequacy, compliance with procedures, training and skills, non-punitive response to mistakes, handoffs, feedback and communication about incidents, communication openness, supervisor expectations and actions promoting resident safety, overall perceptions of resident safety, management support for resident safety, and organizational learning. Scores are based on the average percent positive for each item overall or within each dimension.	WORK	PROCESS	INSTRUMENT	44	STAFF	QUESTIONNAIRE	8
Nursing Home Use per 'X' resident days	Number of nursing home days required/number of resident days (period TBD)	RES	STRUCTURE	MEASURE		CHART	ABSTRACT	2.5
Nursing Stress Scale	34 items that describe situations that have been identified as causing stress for nurses in the performance of their duties. It provides a total stress score as well as scores on subscales that measure the frequency of stress experienced by nurses in the hospital environment: performance of practical activities, professional communication, time management, environment, professional education, and theoretical activity.	WORK	OUTCOME	INSTRUMENT	34	STAFF	QUESTIONNAIRE	7
Observational Measure of Engagement	4 observational ratings of engagement with a stimulus in terms of duration, attention, attitude, and activity, during up to 15 minutes, recorded using specially designed software. Scores are assigned on a 3 point Likert scale (not attentive to very attentive).	RES	OUTCOME	INSTRUMENT	4	RESIDENT	OBSERVATION	3
Ohio Nursing Home Family Satisfaction Survey	62 satisfaction items assessing 13 domains: admissions; social services; activities; choice; receptionist and phone; direct care and nurse aides; professional nurses; therapy; administration; meals and dining; laundry; environment; and general questions. Sample items include "does the social worker treat you with respect; are the nurse aides gentle; and does the facility seem homelike? Items are scored on a 4 point Likert scale, with higher scores reflecting more satisfaction.	RES	OUTCOME	INSTRUMENT	62	FAMILY	QUESTIONNAIRE	7
Ohio Nursing Home Family Satisfaction Survey (2012)	48 satisfaction items assessing 13 domains: admissions; social services; activities; choice; receptionist and phone; direct care and nurse aides; therapy; administration; meals and dining; laundry; resident environment; family environment; and general questions. Sample items include "does the social worker treat you with respect; are the nurse aides gentle; and does the facility seem homelike? Items are scored on a 4 point Likert scale, with higher scores reflecting more satisfaction.	RES	OUTCOME	INSTRUMENT	48	FAMILY	QUESTIONNAIRE	8
Ohio Nursing Home Resident Satisfaction Survey	51 items assessing satisfaction with activities, environment, food, clinical care, personal care, non-clinical staff services, privacy/autonomy, administration, and an overall assessment. Items scored on 4 point Likert scale of frequency.	RES	OUTCOME	INSTRUMENT	51	RESIDENT	INTERVIEW	8

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Organizational Commitment	6 items reflecting organizational identification and organizational involvement, both 3-item scales. Organizational identification included the items: 'I'm proud to tell people where I work'; 'I'm really part of the nursing facility'; and 'I would discourage a close friend from joining the staff'. Organizational involvement included the items: 'I am not willing to put myself out just to help the nursing facility'; 'In my work, I like to feel I am making some effort, not just for myself but for the facility as well'; and 'If I know that my own work had made the nursing facility better, I would be pleased'. Items are scored on a 5 point Likert scale, and summed.	WORK	OUTCOME	INSTRUMENT	6	STAFF	QUESTIONNAIRE	4
Organizational Culture Survey	36 items assessing six subscales of staff perceptions of teamwork, morale, information flow, involvement, supervision, and meetings. Sample items include "the individuals I work with function as a team, this organization respects it workers, and I get the information I need to do my job well." Responses are scored on a 5 point Likert scale, and summed across items.	WORK	PROCESS	INSTRUMENT	36	STAFF	QUESTIONNAIRE	6
Organizational Relationships Scale	18 items measuring perceptions staff nurses have of informal power in the work environment; it measures peer networking, sponsor support, political alliances, and subordinate relationships. Items are scored on a 5 point Likert scale.	WORK	PROCESS	INSTRUMENT	18	STAFF	INTERVIEW QUESTIONNAIRE	5
Organizational Social Context Scale	105 items assessing organizational culture in relation to the expectations that govern the way things are done in an organization; they assess 3 domains of organizational culture (rigidity, proficiency, and resistance) and three dimensions of organizational climate (stress, engagement and functionality). Sample items reflect the amount to which coworkers show signs of stress; the extent to which the agency rewards experience, dedication, and hard work; and how well a person is kept informed about things that are necessary to know. Each item is scored on a 5 point Likert scale, from not at all to a very great amount.	WORK	OUTCOME	INSTRUMENT	105	STAFF	QUESTIONNAIRE	5
Palliative Care Outcome Scale	10 items for patients with advanced cancer and their families that assess more than physical symptoms and quality of life; items assess pain, other symptoms, patient anxiety, family anxiety, information, support, life worthwhile, self-worth, wasted time, and personal affairs. Items are scored on a 5 point Likert scale and summed; higher scores indicate more need.	RES	OUTCOME	INSTRUMENT	10	RESIDENT	QUESTIONNAIRE	5
Pattern Score, LPN	Total number of direct-patient-care LPN/LVN nursing hours during study month divided by total midnight patient census during study month.	WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
Pattern Score, RN	Total number of direct patient care RN nursing hours during study month divided by total midnight patient census during study month.	WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
Percent of hospice residents screened for dyspnea during admission evaluation		TRANS	PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of hospice residents screened for dyspnea treated for dyspnea within 24 hours of treatment		TRANS	PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of hospice residents screened for pain during admission assessment		TRANS	PROCESS	MEASURE		CHART RECORDS	OTHER	5

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Percent of hospice residents screened positive for pain who received clinical assessment within 24 hours		TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of hospice residents with chart documentation of preferences for life sustaining treatments		TRANS	PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of licensed pharmacists with geriatric certification		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of people discharged to home, hospice, acute care, or other health care facility		TRANS	OUTCOME	MEASURE		CHART	ABSTRACT	5
Percent of people receiving anxiolytic medication		MED	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of people receiving hypnotic medication		MED	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of people receiving medication for depression		MED	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of people with adverse drug reaction to opioid		MED	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of physical therapists with geriatric certification		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of physicians with geriatric certification		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of resident with polypharmacy (>9 medications)		MED	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents aged 65 or older who had a medication review within last year		MED	PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of residents aged 65 or older with advance care plan		TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents discharged from SNF for whom a transition record was submitted to facility or physician within 24 hours of discharge		TRANS	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Percent of residents discharged from SNF who received reconciled medication list at discharge		MED	PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of residents discharged from SNF who visited physician within 60 days and had medication reconciliation		TRANS	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents for whom a professional has documented a list of all current medications		MED	PROCESS	MEASURE		CHART	INTERVIEW	5
Percent of residents for whom care plan is created at admission		TRANS	PROCESS	MEASURE		RESIDENT	INTERVIEW	5
Percent of residents for whom care plan is updated annually		TRANS	PROCESS	MEASURE		RESIDENT	INTERVIEW	5
Percent of residents for whom care plan is updated at status change		TRANS	PROCESS	MEASURE		RESIDENT	INTERVIEW	5
Percent of residents for whom care plan is updated quarterly		TRANS	PROCESS	MEASURE		RESIDENT	INTERVIEW	5
Percent of residents on hospice		TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents on medication for pain with complementary treatment		MED	PROCESS	MEASURE		RECORDS	ABSTRACT	5
Percent of residents receiving antipsychotic with no evidence of psychotic disorder		MED	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents screened for future fall risk at least once a year		RES	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents who have a Do Not Resuscitate (DNR) order documented		TRANS	PROCESS	MEASURE		CHART		5
Percent of residents who have advance care plan in medical record		TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents with a history of falls screened for future fall risk at least once a year		RES	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Percent of residents with a history of falls who have a plan of care for fall documented		RES	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with adverse reactions related to pain medications in LTC		MED	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with controlled adverse reactions related to pain medications in LTC		MED	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with in-house acquired pressure ulcers		RES	OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with Medical Order for Life Sustaining Treatment (MOLST) completed		TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents with Medical Orders for Scope of Treatment (MOST) completed		TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents with persistent indicators of dementia and no diagnosis (long and short stay)		RES	PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of Residents with Physician Order for Life-Sustaining Treatment (POLST) Completed		TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents with severe opioid-related constipation or fecal impaction		MED	OUTCOME	MEASURE		CHART RECORDS	OTHER	5
Percent of RNs + LPNs with geriatric certification		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of social workers with a major in aging or geriatric social work		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of staff supplied by agency		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of staff with flu vaccine		WORK	PROCESS	MEASURE		STAFF RECORDS	INTERVIEW QUESTIONNAIRE	10
Perception of Empowerment Instrument	15 items related to perceptions of autonomy (level of freedom and personal control), responsibility (psychological investment and commitment to job), and participation (influence in producing job outcomes and input on organizational goals and processes). Each is answered on a 5 point Likert scale, with higher scores indicating higher perception of empowerment.	WORK	PROCESS	INSTRUMENT	15	STAFF	QUESTIONNAIRE	10

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Perceptions of Pain Management	5 items related to resident assessment of pain management, assessing whether they ever have pain/discomfort that prevents sleep or wakes them from sleep, ever having to wait too long for pain medication, the extent to which nurses avoid pain, receiving information about medications, and being given enough medication to treat pain/discomfort. A count of areas for improvement is derived.	RES	OUTCOME	INSTRUMENT	5	RESIDENT	QUESTIONNAIRE	5
Person-Centered Behavior Inventory (PCBI)	An observational measure of 11 verbal categories (e.g., shows approval, back-channel responses, and giving choices) and 8 nonverbal categories (e.g., resident-directed eye gaze, adjusting to resident's pace, and proximity) rated by coders within 30-second intervals in regard to whether or not the target behavior occurred. The proportion of time nurse aides used those behaviors is determined by dividing the total score by the total number of units.	PCC	PROCESS	INSTRUMENT	19	STAFF	OBSERVATION	5
Person-Centered Climate Questionnaire	17 items assessing care environments that support residents' personhood in health-care settings. Items assess a climate of safety (e.g., approachable, responsive staff and well-organized environment), everydayness (e.g., homelike) and hospitality (e.g., welcoming). Items are scored on a 6 point Likert scale. The total score ranged from 17 to 102 with a high score indicating a climate that is very person-centered.	PCC	OUTCOME	INSTRUMENT	17	RESIDENT	QUESTIONNAIRE	7
Person-Directed Care Measure	50 items assessing person-directed care in relation to knowing the person, comfort care, autonomy, personhood, and support relations. Sample items include knowing residents' fears and worries, quickly helping the resident to the toilet, and spending time with animals as desired. Items are scored on a 5 point Likert scale.	PCC	PROCESS	INSTRUMENT	50	STAFF	QUESTIONNAIRE	5
Physical and Architectural Features Checklist (Multiphasic Environmental Assessment Procedure)	175 items that trained observers marks as either present or absent in an organization. These items are organized into 9 dimensions that represent physical amenities, social-recreational aids, prosthetic aids, orientational aids, safety features, architectural choice, space availability, staff facilities, and community accessibility.	PCC	STRUCTURE	INSTRUMENT	175	STAFF RESIDENT OTHER	INTERVIEW OBSERVATION	6
Pleasant Events Schedule	66 items that people tend to find pleasant, each rated how often it occurred in the last month (0 times, 1-6 times, 7 or more times) and how pleasant it was or would have been, rated on a 3 point Likert scale. Items reflect five subscales: socializing, relaxing, contemplating, being effective, and doing things. A total score or individual scale scores can be derived.	RES	OUTCOME	INSTRUMENT	66	RESIDENT	QUESTIONNAIRE	6
Pleasant Events Schedule Nursing Home (PES-NH)	30 daily activities available in nursing homes, rated in relation to the extent to which activities were offered and available during the last month, each scored on a 3 point Likert scale, as well as the extent to which the resident enjoys the activity now and in the past. Sample activities include sitting, walking, or rolling wheelchair outside, laughing, wearing favorite clothes, and grooming. The sum represents the frequency of these activities during the last month. The instrument is intended to be used in the context of behavioral or cognitive–behavioral therapy for depression.	RES	OUTCOME	INSTRUMENT	30	RESIDENT	QUESTIONNAIRE	7
Policy and Program Information Form (POLIF; Multiphasic Environmental Assessment Procedure)	Unknown number of items that assess an organization's level of selectivity, expectations for functioning, tolerance for deviation, policy clarity, policy choice, resident control, provision for privacy, availability of health services, availability of daily living assistance, and availability of social recreational activities.	PCC	PROCESS	INSTRUMENT	.	STAFF	INTERVIEW	5
Preference Congruence Interview (Advancing Excellence)	16 items assessing satisfaction regarding how well daily preferences (8 items) and activity preferences (8 items) are met. Items refer to the Minimum Data Set (MDS) Section F Interview; the rating of satisfaction is a 3 point Likert scale.	PCC	OUTCOME	INSTRUMENT	16	RESIDENT	INTERVIEW	3

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Price and Mueller Instrument for Measuring Turnover	Five point scale measuring turnover as a "quit rate" computed as the number of employees who leave voluntarily during a period divided by the number employed as of the beginning of that period. It is recommended to express the quit rate as percentages.	WORK	OUTCOME	MEASURE		RECORDS	QUESTIONNAIRE	5
Propensity to Leave	1 item reflecting propensity to leave job: "Do you plan to be working in the nursing home 5 years from now?" The item is scored yes, no, and uncertain.	WORK	OUTCOME	INSTRUMENT	1	STAFF	QUESTIONNAIRE	2
Psychological Empowerment Scale (PEI)	12 multidimensional items assessing psychological empowerment in the workplace. Items asses meaning (e.g., the work is very important), competence (e.g., I have mastered the skills), self-determination (e.g., I have significant autonomy) and impact (e.g., my impact on what happens is large). Items are scored on a 7 point Likert scale, and higher scores indicate higher perceived empowerment.	WORK	OUTCOME	INSTRUMENT	12	STAFF	QUESTIONNAIRE	7
Purpose in Life Test (PIL)	20 item attitude instrument assessing the extent to which someone experiences a sense of meaning and purpose in life. Items are rated on a seven point Likert scale. Sample items include "Life to me seems always exciting" and "If I could choose I would like nine more lives just like this one." Scores range from 0 to 120; higher scores indicate greater purposefulness.	RES	OUTCOME	INSTRUMENT	20	RESIDENT	QUESTIONNAIRE	7
Quality of Dying in Long-Term Care – Cognitively Intact (QOD-LTC-C)	23 items assessing the quality of dying in long-term care, appropriate to rate care for cognitively intact decedents. Each item refers to a potentially important aspect of dying, reflecting domains of sense of purpose, closure, control, social connection, and preparatory tasks. Sample items include "appeared to be at peace" and "participated as much as wanted in decisions about care." Items are scored on a five point Likert scale.	RES	OUTCOME	INSTRUMENT	23	STAFF FAMILY	INTERVIEW	5
Quality of Dying in Long-Term Care (QOD-LTC)	11 items assessing the quality of dying in long-term care. Each item refers to a potentially important aspect of dying, reflecting domains of closure, personhood, and preparatory tasks. Sample items include "there was a nurse or aide with whom the resident felt comfortable" and "resident's dignity was maintained." Items are scored on a five point Likert scale.	RES	OUTCOME	INSTRUMENT	11	STAFF FAMILY	INTERVIEW	5
Quality of Employment Survey (quantitative workload scale)	4 items answered on 5 point Likert scale to assess perceptions of staff workload. Higher scores indicate higher workload and have been associated with lower satisfaction.	WORK	PROCESS	INSTRUMENT	4	STAFF	QUESTIONNAIRE	7
Quality of Life in Dementia	15 items assessing quality of life for people with dementia. Measures are of the frequency, opportunity, and enjoyment of 15 activities (not related to activities of daily living) over one week, potentially within the capacity of a person with dementia. Responses are on a 3 point Likert scale. A summary score is obtained, ranging from 0 to 30, with higher scores indicating more activity.	RES	OUTCOME	INSTRUMENT	15	RESIDENT	INTERVIEW	6
Quality of Life in Late-Stage Dementia (QUALID)	11 items assessing the quality of life in persons with late-stage Alzheimer's disease and other dementing illnesses over the last 7 days. Sample items relate to smiling, appearing physically uncomfortable, and enjoying eating. Items are scored on a 5 point Likert scale related to frequency. The total score is summed, and lower scores reflect a better quality of life.	RES	OUTCOME	INSTRUMENT	11	STAFF FAMILY	INTERVIEW	8
Quality of Life Index-Nursing Home Version	66 items, composed of 33 discrete items rated in terms of satisfaction and importance. Sample items relate to health, health care, pain, emotional support, education, and personal goals. Each item is rated on a 7 point Likert scale.	RES	OUTCOME	INSTRUMENT	66	RESIDENT	QUESTIONNAIRE	6

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Quality of Life Scale (QOLS)	16 items assessing quality of life in terms of material and physical well-being; relationships with other people; social, community, and civic activities; personal development and fulfillment; and recreation. Sample items relate to health, having and raising children, and socializing. Items are rated on a 7 point Likert scale, and summed to create a total score.	RES	OUTCOME	INSTRUMENT	16	RESIDENT	QUESTIONNAIRE	6
Rehospitalization Measure, 30-Day Risk Adjusted (AHCA)	Risk adjusted rate calculated as ((actual rehospitalization / expected rehospitalization) x national average)	TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Rehospitalizations per 'X' resident days		TRANS	OUTCOME	MEASURE		CHART	ABSTRACT	2.5
Remsburg, Armacost, and Bennett Stability Rate	Turnover rate calculated as the total number of full-time NAs who terminated employment during the fiscal year (regardless of length of time employed) divided by the sum of the number of full-time NAs hired who reported to work at least 1 day during the year plus the number of NAs who continued employment from the previous fiscal year. This ratio was expressed as a percentage.	WORK	OUTCOME	MEASURE		STAFF	QUESTIONNAIRE	5
Resident and Staff Observation Checklist: Quality of Life Indicators (RSOC-QOL)	Unobtrusive observer-rated checklist of the social environment; residents, staff, and visitors are observed for 15-30 second to determine resident activity, behavior, alertness, location, grouping, mobility, and restraints; quality of interaction also is noted. Summary data are obtained, and the result is provided on a 0-100 metric.	RES	OUTCOME	INSTRUMENT	.	RESIDENT	OBSERVATION	4
Resident Satisfaction Index	27 items representing resident perceptions of health care, housekeeping services, physical environment, relationships with staff, and social life/activities. Each item is scored yes/no. A shorter 6 item measure also has been used.	RES	OUTCOME	INSTRUMENT	27	RESIDENT	INTERVIEW	6
Resident Satisfaction Survey	52 items generally scored on a 4 point Likert scale to assess responsive nursing home resident's satisfaction with nursing home activities, environment, food, interactions with staff, privacy/autonomy, security, and overall.	RES	OUTCOME	INSTRUMENT	52	RESIDENT	INTERVIEW	5
Resident-Specific Minutes of Care per day		WORK	STRUCTURE	MEASURE		STAFF	ABSTRACT	2.5
RN + LPN + NA Hours per resident		WORK	STRUCTURE	MEASURE		RECORDS	OTHER	2.5
RN + LPN + NA Hours per resident day		WORK	STRUCTURE	MEASURE		RECORDS	OTHER	2.5
RN Cost per resident		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN Daily Hours per bed		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN FTE (Full Time Equivalent) per 100 resident beds		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN FTE (Full Time Equivalent) per 100 resident days		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN FTE (Full-Time Equivalent per resident		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN Hours per resident day		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
RNs + LPNs per 100 beds		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RNs + LPNs per 30 beds		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RNs on unit		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
RNs per 100 resident beds		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RNs per 100 residents		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RNs/LPNs		WORK	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Role Overload Scale (Michigan Organizational Assessment Questionnaire, MOAQ)	3 items answered on 7 point Likert scale that assess perceptions of workload. Scores range from 3-21 and higher scores reflect higher workload and are associated with lower satisfaction.	WORK	PROCESS	INSTRUMENT	3	STAFF	QUESTIONNAIRE	6
Rutgers Satisfaction Assessment Tool – Nursing Home Resident	44 items scored on 1-10 visual analog scale assess cognitively intact nursing home resident's satisfaction with activities, environment, food, personal care, and overall experience.	RES	OUTCOME	INSTRUMENT	44	RESIDENT	INTERVIEW	6
Safely Reduce Hospitalizations Tracking Tool (Advancing Excellence)	Tracking tool that generates rates of readmissions and transfers, as well as information about related processes and reason for transfer.	TRANS	PROCESS	MEASURE		CHART	ABSTRACT	5
Satisfaction With Care at the End of Life in Dementia (SWC-EOLD)	10 items assessing satisfaction with care at the end-of-life for persons with dementia. Sample items include "I feel that my care recipient got all necessary nursing assistance; I felt fully involved in decision making; I felt that all medication issues were clearly explained to me." Items are rated on a 4 point Likert scale, with higher scores indicating more satisfaction.	RES	OUTCOME	INSTRUMENT	10	FAMILY	INTERVIEW	8
Satisfaction with Life Scale (SWLS)	5 items designed to measure global cognitive judgments of satisfaction with one's life. Items include my life is close to ideal, the conditions of my life are excellent, I am satisfied with my life, I have gotten the important things I want in life; if I could live my life over, I would change almost nothing. Items are scored on a 7 point Likert scale.	RES	OUTCOME	INSTRUMENT	5	RESIDENT	QUESTIONNAIRE	7
Satisfaction with Supervision Index	17 items reflecting satisfaction with adequacy of communication, feedback, recognition, and support. Sample items include listening carefully to observations and opinions, being unavailable, ignoring input, and understanding loss when a resident dies. Each item is scored on a 3 point Likert scale ranging from hardly ever to most of the time, with higher scores indicating greater satisfaction.	WORK	OUTCOME	INSTRUMENT	17	STAFF	QUESTIONNAIRE	5
Sheltered Care Environment Scale (Multiphasic Environmental Assessment Procedure)	63 items that measure social climate in congregate residential settings for the elderly, each rated yes/no. Taps perceptions of seven dimensions of the social environment regarding the quality of relationships, the personal growth orientation present, and maintenance and change of the social system.	PCC	OUTCOME	INSTRUMENT	63	RESIDENT	INTERVIEW	7

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Short Pleasant Events Schedule for Alzheimer's Disease (PES-AD)	20 items rated in relation to the extent to which activities were offered and available during the last month, each scored on a 3 point Likert scale, as well as the extent to which the resident enjoys the activity now and in the past. Sample activities include being outside, laughing, exercising, and grooming. The sum represents the frequency of these activities during the last months. The instrument is intended to be used in the context of behavioral or cognitive–behavioral therapy for depression.	RES	OUTCOME	INSTRUMENT	20	RESIDENT FAMILY	QUESTIONNAIRE	7
Shortell Organization and Management Survey, Nursing Home Adaptation – Communication and Leadership Subscales	69 items rated on 5 point Likert scale that address 5 subscales of communication and leadership. Subscales include connectedness, timeliness and understanding, organizational harmony, clinical leadership, and perceived effectiveness. Higher scores indicate better perceived communication (or leadership).	WORK	PROCESS	INSTRUMENT	19	STAFF	QUESTIONNAIRE	7
Skilled Nursing Facility Readmission Measure: All Cause Risk Standardized Readmission Measure	A ratio reflecting the risk-adjusted estimate of the number of SNF stays with unplanned readmissions that occurred within 30 days of discharge from the prior acute hospitalization, after accounting for exclusions.	TRANS	OUTCOME	MEASURE		CHART	ABSTRACT	5
Social Provisions Scale (SPA)	24 items assessing social provisions in six areas: attachment, social integration, opportunity of nurturance, reassurance of worth, guidance, reliable alliance, each scored on a four point Likert scale. Subtotal scores are obtained for each subscale. A higher scores indicates more perceived support.	RES	OUTCOME	INSTRUMENT	24	RESIDENT	INTERVIEW	7
Structured Observation of Morning Care	Observation of the amount of choice offered to residents in four areas, assessing the quality of staff-resident communication: getting out of bed, toileting assistance/incontinence care, dressing, and dining location. Scoring assesses whether there was active choice, passive choice, or no choice. A more simple tool is available that does not distinguish active vs. passive choice.	PCC	PROCESS	INSTRUMENT	4	STAFF	OBSERVATION	3
Subjective Happiness Scale	4 items assessing subjective happiness, each scored on a 7 point Likert scale: I consider myself to be not very happy to very happy; compared to others I consider myself less happy to more happy; the extent to which the person is very happy regardless what is going on; and the extent to which they are not very a happy depending what is going on. The total score is the mean score of all four items.	RES	OUTCOME	INSTRUMENT	4	RESIDENT	QUESTIONNAIRE	7
Supportive Supervisory Scale	15 items about the degree to which supervisor demonstrates behaviors related to respecting uniqueness and being reliable. Sample items include "my charge nurse tries to meet my needs; my charge nurse encourages me in even in difficult situations; I can rely on my charge nurse to be open to any remarks I may make." Responses are provided on a 5 point Likert scale of frequency and totaled; higher scores indicate more supervisory support.	WORK	PROCESS	INSTRUMENT	15	STAFF	INTERVIEW QUESTIONNAIRE	7
Task Centered Behavior Inventory (TCBI)	A measure of caregiving interactions that includes two verbal categories: (a) caregiver's use of "verbally controlling" statements, such as ordering a resident to do something; and (b) caregiver's statements that take the speaking floor from the resident, labeled "interruption /changing topic." Nonverbal behaviors included nursing staff "ignoring" residents and "physically controlling" residents by forcing them physically to do something.	PCC	PROCESS	INSTRUMENT	3	STAFF	OBSERVATION	1
Team Development Measure	31 items measuring team development in clinical settings, including the domains of cohesion, communication, roles and goals, and team primacy. Items are scored on a 3 point Likert scale, ranging from strongly disagree to strongly agree.	WORK	PROCESS	INSTRUMENT	31	STAFF	QUESTIONNAIRE	8

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Therapeutic Environmental Screening Survey for Nursing Homes and Residential Care (TESS-NH/RC)	An observational instrument that describes the physical environment of long-term care settings. Areas assess maintenance, cleanliness, odors, safety, lighting, physical appearance/homelikeness/personalization, orientation/curing, privacy, noises, plants, outdoor areas, residents' appearance, and access to the public toilet. Items rated on a Likert scale, and higher numbers are more favorable. Nursing home version also available.	PCC	STRUCTURE	INSTRUMENT	31	OTHER	OBSERVATION	6
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Resident)	49 items to assess person-centered practices in assisted living and similar long-term care settings, addressing the domains of well-being and belonging (18 items), individualized care and services (12 items), social connectedness (10 items), and atmosphere (9 items). Items are scored on a 4 point Likert scale. Scores for each area and overall are obtained, with higher scores indicating more person-centeredness.	PCC	OUTCOME	INSTRUMENT	49	RESIDENT	QUESTIONNAIRE	8
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Staff)	62 items to assess person-centered practices in assisted living and similar long-term care settings, addressing the domains of workplace practices (23 items), social connectedness (16 items), individualized care and services (8 items), atmosphere (8 items), and caregiver-resident relationships (7 items). Items are scored on a 4 point Likert scale. Scores for each area and overall are obtained, with higher scores indicating more person-centeredness.	PCC	PROCESS	INSTRUMENT	62	STAFF	QUESTIONNAIRE	8
Toolkit of Instruments to Measure End-of-Life Care—After Death Bereaved Family Member Interview	36 items assessing whether end-of-life care meets the expectations and needs of the dying person and their family in 8 areas: informing and making decisions, advance care planning, closure, coordination, achieving control and respect, family emotional support, self-efficacy, and ratings of patient focused/family centered care. Scores are summed and constitute problem scores that indicate concerns regarding the quality of care.	RES	OUTCOME	INSTRUMENT	36	FAMILY	INTERVIEW	6
Turnover, Administrator		WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Turnover, DON		WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Turnover, LPN (Involuntary)		WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	2.5
Turnover, LPN (six month)		WORK	OUTCOME	MEASURE		RECORDS		5
Turnover, LPN (Voluntary)		WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Turnover, NA (Involuntary)		WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	2.5
Turnover, NA (six month)		WORK	OUTCOME	MEASURE		RECORDS		5
Turnover, NA (voluntary)		WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Turnover, RN (Involuntary)		WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	2.5
Turnover, RN (six month)		WORK	OUTCOME	MEASURE		RECORDS		5
Turnover, RN (voluntary)		WORK	OUTCOME	MEASURE		RECORDS	ABSTRACT	5
UCLA Loneliness Scale	20 items reflecting subjective feelings of loneliness and also feelings of social isolation. Responses are on a four point Likert scale, ranging from never too often. Sample items include "I have nobody to talk to; I feel left out; people are around me but not with me." Scores are summed, with higher scores indicating more loneliness. (Other versions with reverse scored items and simplified wording are available.)	RES	OUTCOME	INSTRUMENT	20	STAFF RESIDENT	INTERVIEW QUESTIONNAIRE	7

Name	Description	Domain[1]	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[2]
Unnecessary Drug Use Measure	3 items assessing the appropriateness of drug use: lack of indication, lack of effectiveness, and therapeutic duplication, from the Medication Appropriateness Index (Mal). Each item is rated as appropriate, marginal, or inappropriate. Scoring indicates unnecessary drugs as determined by a continuous measure of the number of medications that lacked an indication, lacked effectiveness, or involved therapeutic duplication.	MED	PROCESS	INSTRUMENT	3	STAFF	ABSTRACT	7
Utrecht Work Engagement Scale (UWES-9)	9 items measuring work engagement, conceived to be a positive work-related state of fulfillment characterized by vigor, dedication, and absorption. Items are scored on a 0-6 point Likert scale, from almost never/a few times a year or less to 6 always/every day. The score is based on the sum of all items, and an average score for each subscale can be derived. The higher the score, the more the respondent experiences feelings of vigor, dedication and/or absorption.	WORK	OUTCOME	INSTRUMENT	9	STAFF	QUESTIONNAIRE	7
Work Environment	19 items assessing characteristics of the work environment including relationship with supervisor (10 items), organizational climate (5 items), time pressure (2 items), and feelings of being valued (2 items). Items are scored on either a 3 or 4 point Likert scale, and mean scores are derived for each subscale.	WORK	PROCESS	INSTRUMENT	19	STAFF	QUESTIONNAIRE	4
Work Stress Inventory	45 stressors assessing six stress domains: related to events, resident care, relations with coworkers, relations with supervisors, workload and scheduling, and physical design. Sample items include ''how often have you had to do tasks for which you have little or no training, how often have you not gotten help from your coworkers when you needed it, and would you describe your workplace as not having a place to get away from residents? Responses use a 5 point Likert scale.	WORK	OUTCOME	INSTRUMENT	45	STAFF	QUESTIONNAIRE	5
Workplace Violence Tool	4 items regarding having been spit on, bitten, hit or pushed. Each item is scored yes/no, and higher scores indicate more violence.	WORK	PROCESS	INSTRUMENT	4	STAFF	QUESTIONNAIRE	6
Yeatts and Cready Dimensions of Empowerment Measure	26 items measuring five empowerment dimensions: ability to make workplace decisions, ability to modify the work, perception that management listens to nursing assistants (NAs), perception that management consults NAs, and global empowerment. Sample items include "I am allowed to make my own decisions" and "NAs are provided reasons when their suggestions are not use." Scores are summed within subscales, and higher scores indicate higher perceptions of empowerment.	WORK	PROCESS	INSTRUMENT	26	STAFF	QUESTIONNAIRE	5

1 Domain are abbreviated as: PCC=Person-centered care; MED=Medication management; TRANS=Care coordination/transitions; WORK=workforce; RES=resident/patient outcomes.
2 Total scores range from 0-10; higher scores reflect higher quality.

Table 1a. Measures and Instruments, Listed Alphabetically (n=254)

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Activities of Daily Living Unmet Need	PERSON	NH OTHER	2	2	2	2	0	8	http://gerontologist.oxfordjournals.org/content/41/1/82.full.pdf
Adverse Reactions to Care Scale	PERSON	AL NH OTHER	2	0	0	1	0	3	Anderson et al. 2014. The adverse reactions to care scale: identifying and measuring triggers during transitions in care. J Gerontol Nurs, 40(2), 21-25.
Alzheimer's Disease Related Quality of Life (ADRQL)	PERSON	AL NH	2	2	2	2	0	8	http://www.hopkinsmedicine.org/psychiatry/specialty_areas/geriatric_psychiatry/research/adrql.html
Annual Short Turnover Survey for North Carolina Department of Health and Human Services' Office of Long Term Care	SYSTEM	NH	.	.	2	.	0	5	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes
Artifacts of Culture Change	SYSTEM	NH	0	0	1	2	2	5	http://www.artifactsofculturechange.org/ACCTool/
Assisted Living Environmental Quality Scale (AL-EQS)	SYSTEM	AL	2	2	0	2	0	6	http://www.unc.edu/depts/tessnh/tess_nh_rc_info.html
Assisted Living Resident Satisfaction Scale (ALRSS)	PERSON	AL	2	2	2	2	0	8	Edelman et al. 2006. Measuring resident and family member determinants of satisfaction with assisted living. Gerontologist, 46(5), 599-608.
Assisted Living Social Activity Scale (AL-SAS)	PERSON	AL	1	0	2	1	0	4	Zimmerman et al. 2003. Social engagement and its relationship to service provision in residential care and assisted living. Soc Work Res, 27(1), 6-18.
Avoidable Rehospitalization Rate, 30-day Adjusted (and annualized)	SYSTEM	NH HOSPITAL	.	.	0	.	2	5	
Benjamin Rose Nurse Assistant Job Satisfaction Scale	PERSON	NH	2	0	2	2	0	6	https://www.nhqualitycampaign.org/files/BenjaminRose_NurseAssistant_JobSatisfactionScale.pdf
Benjamin Rose Relationship with Supervisor Scale	PERSON	NH	2	2	2	2	0	8	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#worker-super
CAHPS Nursing Home Resident Survey: Discharged Resident Instrument	SYSTEM	NH	.	.	1	.	2	7.5	https://cahps.ahrq.gov/surveys-guidance/nh/resident/index.html https://cahps.ahrq.gov/surveys-guidance/nh/instructions/dischargedresident.html
Care Transitions Measure (CTM-15 and CTM-3)	PERSON	HOSPITAL	2	2	2	2	0	8	http://www.gchc.org/wp-content/uploads/2012/08/CTM-15.pdf
Charge Nurse Support Scale	PERSON	NH	2	2	2	2	0	8	McGilton. 2003. Development and psychometric evaluation of supportive leadership scales. Can J Nurs Res, 35(4), 72-86.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Commonwealth Culture Change Survey	SYSTEM	NH	.	.	0	.	2	5	Doty et al. 2008. Culture change in nursing homes: How far have we come? Findings from the Commonwealth Fund 2007 National Survey of Nursing Homes. New York: The Commonwealth Fund.
Conditions for Work Effectiveness Questionnaire (CWEQ-II short form)	PERSON	HOSPITAL	2	2	2	2	0	8	http://publish.uwo.ca/~hkl/tools/cweq/index.html
Consistent Assignment Tracking Tool (Advancing Excellence)	SYSTEM	NH	.	.	2	.	2	10	https://www.nhqualitycampaign.org/goalDetail.aspx?g=ca#tab2
Control, Autonomy, Self-realization, Pleasure-19 (CASP-19)	PERSON	OTHER	1	2	2	1	0	6	Sim et al. 2011. The CASP-19 as a measure of quality of life in old age: Evaluation of its use in a retirement community. Qual Life Res, 20(7), 997-1004.
Core Nurse Resource Scale (CNRS)	PERSON	NH	2	2	2	2	0	8	Simpson. 2010. Development and psychometric evaluation of the Core Nurse Resource Scale. J Nurs Manag, 18(8), 1048-1059.
CORE-Q	PERSON	AL	2	2	2	1	2	9	http://www.ahcancal.org/ncal/quality/qualityinitiative/Pages/Customer-Satisfaction.aspx#coreq
Culture Change Scale (CCS)	PERSON	NH	2	2	2	2	0	8	http://www.commonwealthfund.org/usr_doc/Grant_culturechangefor-profitnursinghome_1099.pdf
Decision Satisfaction Inventory (DSI)	PERSON	NH	2	2	2	2	0	8	Givens et al. 2009. Health care proxies of nursing home residents with advanced dementia: decisions they confront and their satisfaction with decision-making. Am Geriatr Soc, 57(7), 1149–1155.
Dementia Care Mapping	PERSON	AL NH	1	2	0	1	0	4	Sloane et al. 2007. Dementia care mapping as a research tool. Int J Geriatr Psychiatry, 22(6), 580-589.
Dementia Quality of Life Instrument (DQOL)	PERSON	AL NH ADC OTHER	1	2	2	2	0	7	Brod et al. 1999, Conceptualization and measurement of quality of life in dementia: the dementia quality of life instrument (DqoL). Gerontologist, 39(1), 25-35.
Direct Care Worker Job Satisfaction Scale	PERSON	NH	2	1	2	2	0	7	Farida et al. 2008. The impact of stress and support on direct care workers' job satisfaction. Gerontologist, 48(S1), 60-70.
Duncan Choice Index	PERSON	AL NH	2	1	2	2	0	7	Duncan-Myers et al. 2000. Relationship between choice and quality of life among residents in long-term care facilities. Am J Occup Ther, 54, 504-508.
Eaton Instrument for Measuring Turnover	SYSTEM	NH	.	.	2	.	2	10	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#worker-super
Emergency Department Visit per 'X' resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
End of Life in Dementia – Comfort Assessment in Dying (EOLD-CAD)	PERSON	AL NH	2	2	2	1	0	7	Volicer et al. 2001. Scales for evaluation of end-of-life care in dementia. Alz Dis Assoc Dis, 15(4), 194-200.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
End of Life in Dementia – Symptom Management	PERSON	AL NH	1	2	2	1	0	6	Volicer et al. 2001. Scales for evaluation of end-of-life care in dementia. Alz Dis Assoc Dis, 15(4), 194-200.
Ethics Environment Questionnaire (EEQ)	PERSON	HOSPITAL	2	2	2	1	0	7	McDaniel. 1997. Development and psychometric properties of the Ethics Environment Questionnaire. Med Care, 35(9, 901-914.
Experience of Home Scale	PERSON	AL NH	2	2	2	1	0	7	Molony et al. 2007. Psychometric testing of an instrument to measure the experience of home. Res Nurs Health, 30, 518-530.
Falls per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Falls With Death per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Falls With Major Injury per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Falls With Minor Injury per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Falls With Moderate Injury per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Family Perception of Physician-Family Caregiver Communication (FPPFC)	PERSON	AL NH	2	0	2	2	0	6	Biola et al. 2007. Physician communication with family caregivers of long-term care residents at the end of life. J Am Geriatr Soc, 55, 846–856.
Generic Job Satisfaction Scale	PERSON	NH OTHER	1	1	2	1	0	5	http://anthro.vancouver.wsu.edu/media/Course_files/anth-260-edward-h-hagen/job_staisfaction_1997-libre.pdf.
Grau Job Satisfaction Scale	PERSON	AL NH	2	0	2	1	0	5	Grau et al. 1991. Institutional loyalty and job satisfaction among nurse aides in nursing homes. J Aging Health, 3(1), 47-65.
Greater Cincinnati Chapter Well-Being Observation Tool	PERSON	ADC	1	0	0	0	0	1	Kinney et al. 2005. Observed well-being among individuals with dementia: Memories in the Making, an art program, versus other structured activity. Am J Alzheimers Dis Other Demen, 20(4), 220-227.
Grief Support in Healthcare Scale	PERSON	NH	2	2	2	1	0	7	Anderson et al. 2010. The Grief Support in Healthcare Scale: Development and testing. Nursing Research, 59(6), 372-379.
Home Health or One-on-One Care per 'X' resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
Hospice Quality of Life Index	PERSON	HOSPICE	2	2	1	1	0	6	McMillan et al. 1994. Measuring quality of life in hospice patients using a newly developed hospice quality of life scale. Qual Life Res, 3(6), 437-447.
Hospitalizations per 'X' resident days	SYSTEM	NH	.	.	1	.	0	2.5	

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Intent to Turnover Measure (Michigan Organizational Assessment Questionnaire, MOAQ)	PERSON	NH	2	0	2	1	0	5	https://aspe.hhs.gov/sites/default/files/pdf/122171/dcwguideA_0.pdf
Interaction Behavior Measure	PERSON	NH	2	2	0	1	0	5	Burgener et al. 1992. Caregiver and environmental variables related to difficult behaviors in institutionalized, demented elderly persons. J Gerontol, 47(4), 242-249.
Job Attitude Scale	PERSON	AL NH	2	1	2	1	0	6	Flannery et al. 2012. Reliability and validity assessment of the Job Attitude Scale. Geriatr Nurs, 33(6), 465-472.
Job Characteristics Scales of the Job Diagnostic Survey	PERSON	NH	1	2	2	2	0	7	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Job Descriptive Index	PERSON	NH	2	1	2	1	0	6	Shahnazi et al. 2014. Job satisfaction survey among health centers staff. J Edu Health Promot, 3:35.
Job Role Quality Questionnaire	PERSON	NH	2	2	2	2	0	8	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Job Satisfaction	PERSON	NH	2	0	2	2	0	6	Probst et al. 2010. The relationship between workplace environment and job satisfaction among nursing assistants: findings from a national survey. J Am Med Dir Assoc, 11(4), 246-252.
Job Satisfaction Subscale (Michigan Organizational Assessment Questionnaire, MOAQ)	PERSON	NH	2	2	2	1	0	7	Bowling et al. 2008. A meta-analytic examination of the construct validity of the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale. J Vocat Behav, 73, 63-77.
Job Satisfaction, Overall	PERSON	NH HOSPITAL	2	0	2	0	0	4	Gittell et al. 2008. Impact of relational coordination on job satisfaction and quality outcomes: a study of nursing homes. Human Resource Manage, 18(2), 154-170.
LEAP Leadership Behaviors and Organizational Climate Survey (leadership behaviors scale)	PERSON	NH	2	2	2	2	0	8	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
LEAP Leadership Behaviors and Organizational Climate Survey (organizational climate scale)	PERSON	NH	1	2	2	2	0	7	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
LPN + NA Direct Care Time per resident day	SYSTEM	AL NH HOSPITAL	.	.	1	.	2	7.5	
LPN Cost per resident	SYSTEM	AL NH	.	.	2	.	0	5	
LPN FTE (Full Time Equivalent)	SYSTEM	HOSPITAL	.	.	2	.	0	5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. Doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5.
LPN FTE (Full Time Equivalent) per 100 beds	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. Doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.

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LPN FTE (Full Time Equivalent) per 100 resident days	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. Doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.
LPN FTE (Full Time Equivalent) per 100 residents	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. Doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5.
LPN Hours per bed	SYSTEM	NH	.	.	2	.	0	5	
LPN Hours per resident day	SYSTEM	AL NH HOSPITAL	.	.	1	.	2	7.5	
Lubben Social Network Scale – 18 item version	PERSON	AL NH OTHER	0	0	2	1	0	3	Lubben et al. 2006. Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. Gerontologist, 46(4), 503–513.
Lubben Social Network Scale – 6 item version	PERSON	AL NH OTHER	2	1	2	1	0	6	Lubben et al. 2006. Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. Gerontologist, 46(4), 503–513.
Lubben Social Network Scale – Revised Version	PERSON	AL NH OTHER	0	0	2	1	0	3	Lubben et al. 2006. Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. Gerontologist, 46(4), 503–513.
Maslach Burnout Inventory	PERSON	AL NH HOSPICE HOSPITAL	2	1	2	1	0	6	Maslach. 1982. Burnout: The cost of caring. Englewood Cliffs: PrenticeHall.
Measurement Tool for Clinical Practice Guideline Implementation: Measures for Falls and Fall Risk	SYSTEM	NH	.	.	1	.	2	7.5	http://www.cpgnews.org/FF/MeasureTool-Falls.pdf
Medical Specialist Visits per 'X' resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
Medication Administration Practices (MAP)	PERSON	AL	2	1	2	2	0	7	Zimmerman et al. 2011. Medication administration errors in assisted living: scope, characteristics, and the importance of staff training. J Am Geriatr Soc, 59(6), 1060-1068.
Medication Appropriateness Index	PERSON	NH HOSPITAL	2	0	1	2	0	5	Hanlon et al. 1992. A method for assessing drug therapy appropriateness. J. Clin. Epidemiol, 45, 1045-1051.
Medication Quantification Scale	PERSON	NH HOSPICE	2	2	1	2	0	7	Steedman et al. 1992. Chronic pain medications: Equivalence levels and method of quantifying usage. Clin J Pain, 8, 204-214.
Medication Reconciliation	SYSTEM	HOSPITAL	.	.	2	.	2	10	http://www.ihi.org/resources/Pages/Publications/Medicationreconciliation.aspx
Medication Tracking Tool (Advancing Excellence)	SYSTEM	NH	.	.	2	.	2	10	https://www.nhqualitycampaign.org/files/tools/AE_MedicationTrackingToolInstructions_9-24-13.pdf
Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation	SYSTEM	HOSPITAL	.	.	2	.	2	10	http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/match/index.html

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Menorah Park Engagement Scale – Brief Form	PERSON	AL NH ADC	0	0	0	2	0	2	Camp. 2010. Origins of Montessori programming for dementia. Nonpharmacol Ther Dement, 1(2), 163-174.
Minnesota Satisfaction Questionnaire	PERSON	NH	2	1	1	1	0	5	http://vpr.psych.umn.edu/msq.html
Mobility Tracking Tool (Advancing Excellence)	SYSTEM	NH	.	.	1	.	2	7.5	https://www.nhqualitycampaign.org/goalDetail.aspx?g=mob#tab2
Mortality rate	SYSTEM	NH HOSPITAL	.	.	1	.	0	2.5	https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/hospitalqualityinits/downloads/hospitalmortalityaboutami_hf.pdf
NA FTE (Full Time Equivalent)	SYSTEM	HOSPITAL	.	.	2	.	0	5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. Doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.
NA FTE (Full Time Equivalent) per 100 beds	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. Doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5.
NA FTE (Full Time Equivalent) per 100 resident days	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. Doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.
NA FTE (Full Time Equivalent) per 100 residents	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. Doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.
NA Hours per bed	SYSTEM	NH	.	.	1	.	2	7.5	Temple et al. 2009. Exploring correlates of turnover among nursing assistants in the National Nursing Home Survey. Health Care Manage Rev, 34(2), 182-190.
NA Hours per resident day	SYSTEM	NH	.	.	1	.	2	7.5	Temple et al. 2009. Exploring correlates of turnover among nursing assistants in the National Nursing Home Survey. Health Care Manage Rev, 34(2), 182-190.
NA Per Nursing Staff (RN+LPN)	SYSTEM	AL NH	.	.	2	.	0	5	
National Nursing Assistant Survey (Management/Supervision; Organizational Commitment/Job Satisfaction; Workplace Environment sections only)	PERSON	NH	.	.	2	.	2	10	http://www.cdc.gov/nchs/data/nnhsd/2004NNASQuestionnaire.pdf
Number of Hospital days	SYSTEM	AL NH	.	.	2	.	0	5	
Number of Hospital Transfers	SYSTEM	NH	.	.	2	.	0	5	Fried et al. 1997. Frailty and hospitalizational of long-term stay nursing home residents. J Am Geriatr Soci, 45(3), 265-269.

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Number of Non-Prescription Medications	PERSON	AL NH	.	.	2	.	0	5	
Number of Prescription Medications	PERSON	AL NH	.	.	2	.	0	5	
Numeric Rating Scale for Pain	PERSON	NH HOSPICE HOSPITAL	2	2	2	1	0	7	Hawker et al. 2011. Measures of adult pain. Athrit Care Res, 63(S11), S240-S252.
Nurse-Nursing Assistant Caregiver Reciprocity Scale	PERSON	NH	2	2	2	1	0	7	Yen-Patton et al. 2013. Development and psychometric validation of the nurse-nursing assistant-caregiver reciprocity scale: measuring reciprocal ethical caring. IJHC, 17(1), 7.
Nursing Assistant Barriers Scale (NABS)	PERSON	NH	2	1	2	2	0	7	Parmelee et al. 2009. Perceived barriers to effective job performance among nursing assistants in long-term care. J Am Med Dir Assoc, 10(8), 559-567.
Nursing Facility Family Satisfaction Questionnaire	PERSON	NH	2	0	2	2	0	6	Castle. (2004). Family satisfaction with nursing facility care. Int J Qual Health Care, 16(6), 1-7.
Nursing Home Administrator Job Satisfaction Scale (NHA-JQ)	PERSON	NH	1	1	2	2	0	6	Castle et al. 2007. Job satisfaction of nursing home administrators and turnover. Med Care Res Rev, 64(2), 191-211.
Nursing Home Certified Nurse Assistant Job Satisfaction Questionnaire (NH-CNA-JSQ)	PERSON	NH	1	2	2	1	0	6	Castle, N.G. (2010). An instrument to measure job satisfaction of certified nurse assistants. Appl Nurs Res, 23, 214-220.
Nursing Home Compare (MDS) Percent of Residents Who Self-Report Moderate to Severe Pain (long- and short-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38335&search=Assessment+of+pain+control+
Nursing Home Compare Five Star Quality Rating System of Staffing Levels	SYSTEM	NH	.	.	0	.	2	5	https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf
Nursing Home Compare Percent of High Risk Residents With Pressure Ulcers (long- and short-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38336
Nursing Home Compare Percent of Low Risk Residents Who Lose Control of Their Bowels or Bladder (long-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38346
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38341&search=Long+term+care+facility

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Pneumococcal Vaccine (long- and short-stay)									
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (long- and short-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38337
Nursing Home Compare Percent of Residents Experiencing One or More Falls With Major Injury (long-stay)	SYSTEM	NH ADC	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38334
Nursing Home Compare Percent of Residents Receiving Antipsychotic Medication (long-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.medicare.gov/NursingHomeCompare/About/Long-Stay-Residents.html
Nursing Home Compare Percent of Residents Who Are Newly Administered Antipsychotic Medications (short-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.medicare.gov/NursingHomeCompare/About/Short-Stay-Residents.html
Nursing Home Compare Percent of Residents Who Have Depressive Symptoms (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38351
Nursing Home Compare Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/hhs/content.aspx?id=1214#.VnHMaL-fKsI
Nursing Home Compare Percent of Residents Who Lost Too Much Weight (long-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38350
Nursing Home Compare Percent of Residents Who Were Physically Restrained (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38348
Nursing Home Compare Percent of Residents Whose Need for Help With ADLs Has Increased (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38349

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Nursing Home Compare Percent of Residents With a Urinary Tract Infection (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38345
Nursing Home Compare Percent of Residents With Pressure Ulcers that are New or Worsened (short-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38325
Nursing Home Nurse Aide Job Satisfaction Questionnaire	PERSON	NH	1	0	2	1	0	4	Castle. 2007. Assessing job satisfaction of nurse aides in nursing homes: the Nursing Home Nurse Aide Job Satisfaction Questionnaire. J Gerontol Nur, 33(5), 41-47.
Nursing Home Survey on Patient Safety (Modified for Assisted Living)	SYSTEM	AL NH HOSPITAL	2	2	2	2	0	8	Castle et al. 2012. Measuring administrators' and direct care workers' perceptions of the safety culture in assisted living facilities. Jt Comm J Qual Patient Saf, 38(8), 375-382.
Nursing Home Survey on Resident Safety Culture (AHRQ)	SYSTEM	NH	2	0	2	2	2	8	Nursing Home Survey on Patient Safety Culture. November 2015. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/nursing-home/index.html
Nursing Home Use per 'X' resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
Nursing Stress Scale	PERSON	HOSPITAL	2	2	2	1	0	7	Gray-Toft et al. 1981. Stress among 64hospital nursing staff: its causes and effects. Soc Sci Med A, 15(5), 639-647.
Observational Measure of Engagement	PERSON	NH	1	1	0	1	0	3	Cohen-Mansfield et al. 2009. Engagement in persons with dementia: the concept and its measurement. Am J Geriatr Psychiatry, 17(4), 299-307.
Ohio Nursing Home Family Satisfaction Survey	PERSON	NH	1	2	2	2	0	7	Ejaz et al. 2003. Developing a satisfaction survey for families of Ohio's nursing home residents. Gerontologist, 43(4), 447-458.
Ohio Nursing Home Family Satisfaction Survey (2012)	PERSON	NH	2	2	2	2	0	8	Straker et al. 2013. Implementation of the 2012 Ohio nursing home family satisfaction survey: research brief. Scripps Gerontology Center Publications.
Ohio Nursing Home Resident Satisfaction Survey	PERSON	NH	2	2	2	2	0	8	Straker et al. 2007. Developing and testing a satisfaction survey for nursing home residents: the Ohio experience. J Aging Soc Policy, 19(2), 83-105.
Organizational Commitment	PERSON	NH	1	0	2	1	0	4	Karsh et al. 2005. Job and organizational determinants of nursing home employee commitment, job satisfaction and intent to turnover. Ergonomics, 48(10), 1260-1281.
Organizational Culture Survey	PERSON	NH	2	2	1	1	0	6	Sikorska-Simmons. 2006. Organizational culture and work-related attitudes among staff in assisted living. J Gerontol Nurs, 32(2), 19-27.
Organizational Relationships Scale	PERSON	AL NH	2	0	2	1	0	5	https://cardinalscholar.bsu.edu/bitstream/handle/123456789/194825/OyerM_2011-2_BODY.pdf?sequence=1.

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Organizational Social Context Scale	PERSON	NH	2	0	2	1	0	5	Cassie et al. 2012. Organizatonal and individual conditions associated with depressive symptoms among nursing home residents over time. Gerontologist, 52(6), 812-821.
Palliative Care Outcome Scale	PERSON	HOSPICE HOSPITAL	1	2	1	1	0	5	Hearn et al. 1999. Development and validation of core outcome measure for palliative care: the palliative care outcome scale. Qual Health Care, 8, 219-227.
Pattern Score, LPN	SYSTEM	NH	.	.	1	.	0	2.5	
Pattern Score, RN	SYSTEM	NH	.	.	1	.	0	2.5	
Percent of hospice residents screened for dyspnea during admission evaluation	SYSTEM	HOSPICE HOSPITAL	.	.	2	.	0	5	Schenck et al. 2010. The Peace project: identification of quality measures for hospice and palliative care. J Palliat Med, 13(12), 1451-1459.
Percent of hospice residents screened for dyspnea treated for dyspnea within 24 hours of treatment	SYSTEM	HOSPICE	.	.	2	.	0	5	Schenck et al. 2010. The Peace project: identification of quality measures for hospice and palliative care. J Palliat Med, 13(12), 1451-1459.
Percent of hospice residents screened for pain during admission assessment	SYSTEM	HOSPICE HOSPITAL	.	.	2	.	0	5	Schenck et al. 2010. The Peace project: identification of quality measures for hospice and palliative care. J Palliat Med, 13(12), 1451-1459.
Percent of hospice residents screened positive for pain who received clinical assessment within 24 hours	SYSTEM	HOSPICE HOSPITAL	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=36950
Percent of hospice residents with chart documentation of preferences for life sustaining treatments	SYSTEM	HOSPICE HOSPITAL	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=36953
Percent of licensed pharmacists with geriatric certification	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of people discharged to home, hospice, acute care, or other health care facility	SYSTEM	HOSPITAL	.	.	2	.	0	5	https://manual.jointcommission.org/releases/TJC2013A/DataElem0537.html
Percent of people receiving anxiolytic medication	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of people receiving hypnotic medication	SYSTEM	AL NH	.	.	2	.	0	5	

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Percent of people receiving medication for depression	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of people with adverse drug reaction to opioid	SYSTEM	HOSPITAL	.	.	2	.	0	5	Lazarou et al. 1998. Incidence of adverse drug reactions in hospitalized patients: A meta-analysis of prospective studies. JAMA, 279(15), 1200-1205.
Percent of physical therapists with geriatric certification	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of physicians with geriatric certification	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of resident with polypharmacy (>9 medications)	SYSTEM	NH	.	.	2	.	0	5	Dwyer et al. 2010. Polypharmacy in nursing home residents in the United States: Results of the 2004 National Nursing Home Survey. Am J Geriatr Pharmacothe, 8(1), 63-72.
Percent of residents aged 65 or older who had a medication review within last year	SYSTEM	NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=48813
Percent of residents aged 65 or older with advance care plan	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of residents discharged from SNF for whom a transition record was submitted to facility or physician within 24 hours of discharge	SYSTEM	NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/hhs/content.aspx?id=1787#.VnH2CL-fKsI
Percent of residents discharged from SNF who received reconciled medication list at discharge	SYSTEM	NH HOSPITAL OTHER	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=28107
Percent of residents discharged from SNF who visited physician within 60 days and had medication reconciliation	SYSTEM	NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=28107
Percent of residents for whom a professional has documented a list of all current medications	SYSTEM	NH DOCTOR	.	.	2	.	0	5	https://www.apta.org/uploadedFiles/APTAorg/Payment/Medicare/Pay_for_Performance/PQRS/2015/PQRS2015Measure130CurrentMedications.pdf
Percent of residents for whom care plan is created at admission	SYSTEM	AL	.	.	2	.	0	5	
Percent of residents for whom care plan is updated annually	SYSTEM	AL	.	.	2	.	0	5	

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Percent of residents for whom care plan is updated at status change	SYSTEM	AL	.	.	2	.	0	5	
Percent of residents for whom care plan is updated quarterly	SYSTEM	AL	.	.	2	.	0	5	
Percent of residents on hospice	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of residents on medication for pain with complementary treatment	SYSTEM	AL NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=48247&search=Medication+Therapy+Management+
Percent of residents receiving antipsychotic with no evidence of psychotic disorder	SYSTEM	OTHER	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=47514
Percent of residents screened for future fall risk at least once a year	SYSTEM	NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=28112
Percent of residents who have a Do Not Resuscitate (DNR) order documented	SYSTEM	NH	.	.	2	.	0	5	Manu et al. 2015. Advance directives and care received by older nursing home residents. Am J Hosp Palliat Care. Epub ahead of print. Oct 22. Pii: 1049909115611875. [Epub ahead of print]
Percent of residents who have advance care plan in medical record	SYSTEM	NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=28108
Percent of residents with a history of falls screened for future fall risk at least once a year	SYSTEM	NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/hhs/content.aspx?id=1636#.VnH7X7-fKsI
Percent of residents with a history of falls who have a plan of care for fall documented	SYSTEM	NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=27972
Percent of residents with adverse reactions related to pain medications in LTC	SYSTEM	AL NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=48255
Percent of residents with controlled adverse reactions related to pain medications in LTC	SYSTEM	AL NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=48256
Percent of residents with in-house acquired pressure ulcers	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of residents with Medical Order for Life Sustaining Treatment (MOLST) completed	SYSTEM	AL NH HOSPICE HOSPITAL DOCTOR	.	.	2	.	0	5	http://marylandmolst.org/docs/MOLST%20MM3%202013%20FINAL%20PROPOSED%2072613%20POSTED%2021714-no-instructions.pdf

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Percent of residents with Medical Orders for Scope of Treatment (MOST) completed	SYSTEM	AL NH HOSPICE HOSPITAL DOCTOR	.	.	2	.	0	5	http://www.polst.org/wp-content/uploads/2012/12/NC-MOST-Form.pdf
Percent of residents with persistent indicators of dementia and no diagnosis (long and short stay)	SYSTEM	NH	.	.	2	.	0	5	http://www.qualityforum.org/Publications/2013/04/Neurology_Endorsement_Maintenance_-_Phase_II_Technical_Report.aspx
Percent of Residents with Physician Order for Life-Sustaining Treatment (POLST) Completed	SYSTEM	AL NH HOSPICE HOSPITAL	.	.	2	.	0	5	
Percent of residents with severe opioid-related constipation or fecal impaction	SYSTEM	AL NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=48259
Percent of RNs + LPNs with geriatric certification	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of social workers with a major in aging or geriatric social work	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of staff supplied by agency	SYSTEM	HOSPITAL	.	.	2	.	0	5	Lake et al. 2010. Patient falls: association ith hospital magnet status and nursing unit staffing. Res Nurs Health, 33, 413-425.
Percent of staff with flu vaccine	SYSTEM	NH	.	.	2	.	2	10	Daugherty et al. 2015. Influenza vaccination rates and beliefs about vaccination among nursing home employees. Am J Infect Control, 43(2), 100-106.
Perception of Empowerment Instrument	PERSON	NH	2	2	2	2	2	10	https://www.nhqualitycampaign.org/files/PEI_Instrument.pdf
Perceptions of Pain Management	PERSON	NH	0	1	2	2	0	5	Teno et al. 2008. Development of a brief survey to measure nursing home residents' perceptions of pain management. J Pain Symptom Manag, 36(6), 572-583.
Person-Centered Behavior Inventory (PCBI)	PERSON	NH	2	2	0	1	0	5	Wolcott et al. 2011. Measuring the person-centeredness of caregivers working with nursing home residents with dementia. Behav Ther, 42, 89-99.
Person-Centered Climate Questionnaire	SYSTEM	NH HOSPITAL	2	1	2	2	0	7	Yoon et al. 2015. Person-centered climate questionnaire-patient in English: a psychometric evaluation study in long-term care settings. Arch Gerontol Geriat, 61, 81-87.
Person-Directed Care Measure	PERSON	AL NH	1	1	1	2	0	5	White et al. 2008. Development and testing of a measure of person-directed care. Gerontologist, 48, 114-123.
Physical and Architectural Features Checklist (Multiphasic Environmental Assessment Procedure)	SYSTEM	AL NH	2	2	0	2	0	6	Moos et al. 1980. Assessing the physical and architectural features of sheltered care settings. J of Gerontol, 35(4), 571-583.

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Pleasant Events Schedule	PERSON	NH	2	1	2	1	0	6	https://med.stanford.edu/oafc/coppes_files/coppes_measure_scoring.pdf
Pleasant Events Schedule Nursing Home (PES-NH)	PERSON	NH	2	2	2	1	0	7	Meeks et al. 2009. The Pleasant Events Schedule—Nursing Home Version: A useful tool for behavioral interventions in long-term care. Aging Ment Health, 13(3), 445-455.
Policy and Program Information Form (POLIF; Multiphasic Environmental Assessment Procedure)	SYSTEM	AL NH	0	1	2	2	0	5	Moos. 1996. Evaluating residential facilities: The Multiphasic Environmental Assessment Procedure. Thousand Oaks: Sage Publications.
Preference Congruence Interview (Advancing Excellence)	PERSON	NH	0	0	2	1	0	3	https://www.nhqualitycampaign.org/files/AE_PCC_implementation_guide_v1.10.pdf
Price and Mueller Instrument for Measuring Turnover	SYSTEM	HOSPITAL	.	.	2	.	0	5	Davidson et al. 1997. The effects of health care reforms on jobs satisfaction and voluntary turnover among hospital-based nurses. Med Care, 35(6), 634-645.
Propensity to Leave	PERSON	AL NH HOSPITAL OTHER	0	0	2	0	0	2	Kirschling et al. 2011. Predictors of registered nurses' willingness to remain in nursing. Nurs Econ, 29(3), 111-117.
Psychological Empowerment Scale (PEI)	PERSON	NH	2	2	2	1	0	7	Spreitzer. 1995. Psychological empowerment in the workplace: dimensions, measurement, and validation. Acad Manage J, 38(5), 1442-1465.
Purpose in Life Test (PIL)	PERSON	AL	2	2	2	1	0	7	Crumbaugh. 1968. Cross-validation of Purpose in Life Test based on Frankl's concepts. J Individ Psychol, 24, 74-81.
Quality of Dying in Long-Term Care – Cognitively Intact (QOD-LTC-C)	PERSON	AL	2	0	2	1	0	5	Munn et al. 2007. Measuring the quality of dying in long-term care. J Am Geriatr Soc, 55, 1371–1379.
Quality of Dying in Long-Term Care (QOD-LTC)	PERSON	AL	1	0	2	2	0	5	Munn et al. 2007. Measuring the quality of dying in long-term care. J Am Geriatr Soc, 55, 1371–1379.
Quality of Employment Survey (quantitative workload scale)	PERSON	NH	1	2	2	2	0	7	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Quality of Life in Dementia	PERSON	AL NH	2	0	2	2	0	6	Albert et al. 1996. Quality of life in patients with Alzheimer's disease as reported by patient proxies. J Am Geriatr Soc, 44, 1342–1347.
Quality of Life in Late-Stage Dementia (QUALID)	PERSON	AL NH	2	2	2	2	0	8	Weiner et al. 2000. The quality of life in late-stage dementia (QUALID) scale. J Am Med Dir Assoc, 1, 114–116.
Quality of Life Index-Nursing Home Version	PERSON	NH	2	2	1	1	0	6	Ferrans et al. 1992. Psychometric assessment of the Quality of Life Index. Res Nurs Health, 15, 29-38.
Quality of Life Scale (QOLS)	PERSON	AL	2	1	2	1	0	6	Burckhardt et al. 2003. The Quality of Life Scale (QOLS): reliability, validity, and utilization. Health Qual Life Outcomes, 23, 1:60.
Rehospitalization Measure, 30-Day Risk Adjusted (AHCA)	SYSTEM	NH	.	.	0	.	2	5	http://www.ahcancal.org/research_data/trendtracker/Documents/Rehospitalization%20Help%20Doc.pdf

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Rehospitalizations per 'X' resident days	SYSTEM	NH	.	.	1	.	0	2.5	
Remsburg, Armacost, and Bennett Stability Rate	SYSTEM	NH	.	.	2	.	0	5	Remsburg et al. 1999. Improving nursing assistant turnover and stability rates in a long-term care facility. Geriatr Nurs, 20(4), 203-208.
Resident and Staff Observation Checklist: Quality of Life Indicators (RSOC-QOL)	PERSON	NH	2	1	0	1	0	4	Sloane et al. 2005. Evaluating the quality of life of long-term care residents with dementia. Gerontologist, 45(S1), 37-49.
Resident Satisfaction Index	PERSON	AL	2	1	2	1	0	6	Sikorska-Simmons. 2001. Development of an instrument to measure resident satisfaction with assisted living. J Appl Gerontol, 20(1), 1 57-173.
Resident Satisfaction Survey	PERSON	NH	1	0	2	2	0	5	Kane. 2005. Quality of Life in Nursing Homes. Final Report. Centers for Medicare and Medicaid. Www.health.state.mn.us/nhreportcard/mn_survey_instrument.pdf
Resident-Specific Minutes of Care per day	SYSTEM	NH	.	.	1	.	0	2.5	
RN + LPN + NA Hours per resident	SYSTEM	NH	.	.	1	.	0	2.5	Harrington et al. 2003. Nursing home staffing, turnover, and case mix. Med Care Res Rev, 60(3), 366-392.
RN + LPN + NA Hours per resident day	SYSTEM		.	.	1	.	0	2.5	Harrington et al. 2003. Nursing home staffing, turnover, and case mix. Med Care Res Rev, 60(3), 366-392.
RN Cost per resident	SYSTEM	NH	.	.	1	.	0	2.5	
RN Daily Hours per bed	SYSTEM	NH	.	.	1	.	0	2.5	
RN FTE (Full Time Equivalent) per 100 resident beds	SYSTEM	AL NH	.	.	1	.	0	2.5	
RN FTE (Full Time Equivalent) per 100 resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
RN FTE (Full-Time Equivalent per resident	SYSTEM	AL NH HOSPICE HOSPITAL	.	.	1	.	0	2.5	
RN Hours per resident day	SYSTEM	NH	.	.	1	.	0	2.5	
RNs + LPNs per 100 beds	SYSTEM	NH	.	.	1	.	0	2.5	
RNs + LPNs per 30 beds	SYSTEM	NH	.	.	1	.	0	2.5	
RNs on unit	SYSTEM	NH	.	.	2	.	0	5	

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
RNs per 100 resident beds	SYSTEM	AL NH	.	.	1	.	0	2.5	
RNs per 100 residents	SYSTEM	AL NH	.	.	1	.	0	2.5	
RNs/LPNs	SYSTEM	NH	.	.	2	.	0	5	
Role Overload Scale (Michigan Organizational Assessment Questionnaire, MOAQ)	PERSON	NH	1	2	1	2	0	6	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Rutgers Satisfaction Assessment Tool – Nursing Home Resident	PERSON	NH	2	0	2	2	0	6	http://www.ihhcpar.rutgers.edu/org_units/default.asp?v=2&o=1
Safely Reduce Hospitalizations Tracking Tool (Advancing Excellence)	SYSTEM	NH	.	.	2	.	0	5	https://www.nhqualitycampaign.org/goalDetail.aspx?g=hosp#tab2
Satisfaction With Care at the End of Life in Dementia (SWC-EOLD)	PERSON	AL NH	2	2	2	2	0	8	Volicer et al. 2001. Scales for evaluation of end of life care in dementia. Alz Dis Assoc Dis, 15(4), 194-200.
Satisfaction with Life Scale (SWLS)	PERSON	AL	2	2	2	1	0	7	Kobau et al. 2010. Well-being assessment: An evaluation of well-being scales for public health and population estimates of well-being among US adults. Appl Psychol: Health Well-being, 2(3), 272-297.
Satisfaction with Supervision Index	PERSON	AL NH	2	0	2	1	0	5	Noelker et al. 2009. Factors affecting frontline workers' satisfaction with supervision. J Aging Health, 21(1), 85-101.
Sheltered Care Environment Scale (Multiphasic Environmental Assessment Procedure)	PERSON	NH	2	2	2	1	0	7	Lemke et al. 1987. Measuring the social climate of congregate residences for older people: Sheltered Care Environment Scale. Psychol Aging, 2(1), 20-29.
Short Pleasant Events Schedule for Alzheimer's Disease (PES-AD)	PERSON	DOCTOR	2	2	2	1	0	7	Logsdon et al. 1997. The Pleasant Events Schedule-AD: Psychometric properties and relationship to depression and cognition in Alzheimer's disease patients. Gerontologist, 37, 40-45.
Shortell Organization and Management Survey, Nursing Home Adaptation – Communication and Leadership Subscales	PERSON	NH HOSPITAL	2	2	1	2	0	7	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Skilled Nursing Facility Readmission Measure: All Cause Risk Standardized Readmission Measure	SYSTEM	NH	.	.	0	.	2	5	Centers for Medicare and Medicaid Services. 2015. Skilled Nursing Facility Readmission Measure: All Cause Risk Standardized Readmission Measure: Draft Technical Report. Available at https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Downloads/SNFRM-Technical-Report-3252015.pdf

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Social Provisions Scale (SPA)	PERSON	NH	2	2	2	1	0	7	Cutrona et al. 1998. Predictors and correlates of continuing involvement with the baby's father among adolescent mothers. J Fam Psychol, 12, 369-387.
Structured Observation of Morning Care	PERSON	NH	2	0	0	1	0	3	Simmons et al. 2011. Resident-directed long-term care: staff provision of choice during morning care. Gerontologist, 51(6), 867-875.
Subjective Happiness Scale	PERSON	AL	2	2	2	1	0	7	Lyubomirsky et al. 1999. A measure of subjective happiness: Preliminary reliability and construct validation. Soc Indic Res, 46, 137-155.
Supportive Supervisory Scale	PERSON	NH	2	1	2	2	0	7	McGilton. 2010. Development and psychometric testing of the Supportive Supervisory Scale. J Nurs Scholarship, 42(2),223-232.
Task Centered Behavior Inventory (TCBI)	PERSON	NH	0	0	0	1	0	1	Lann-Wolcott et al. 2011. Measuring the person-centeredness of caregivers working with nursing home residents with dementia. Behav Ther, 42(1), 89-99.
Team Development Measure	PERSON	NH	2	2	2	2	0	8	Stock. 2013. Measuring team development in clinical care settings. Fam Med, 45(10),691-700.
Therapeutic Environmental Screening Survey for Nursing Homes and Residential Care (TESS-NH/RC)	SYSTEM	AL	2	2	0	2	0	6	http://www.unc.edu/depts/tessnh/pdf_files/Tess%20NHRC%20Revised%201_14_02.pdf
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Resident)	PERSON	AL	2	2	2	2	0	8	http://www.theceal.org/component/k2/item/download/287_50e76f0f81f241edd749a368f8f3f371
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Staff)	PERSON	AL	2	2	2	2	0	8	http://www.theceal.org/component/k2/item/download/287_50e76f0f81f241edd749a368f8f3f371
Toolkit of Instruments to Measure End-of-Life Care—After Death Bereaved Family Member Interview	PERSON	AL NH HOSPITAL	2	1	1	2	0	6	Teno et al. 2001. Validation of toolkit after-death bereaved family member interview. J Pain Symptom Manage, 22, 752–758.
Turnover, Administrator	SYSTEM	AL NH	.	.	2	.	0	5	http://www.ahcancal.org/ncal/resources/documents/2010%20vrt%20report-final.pdf Administrator turnover and quality of care in nursing homes. Castle NG. Gerontologist. 2001 Dec;41(6):757-67.
Turnover, DON	SYSTEM	AL NH	.	.	2	.	0	5	http://www.ahcancal.org/ncal/resources/documents/2010%20vrt%20report-final.pdf Measuring staff turnover in nursing homes. Castle NG. Gerontologist. 2006 Apr;46(2):210-9.
Turnover, LPN (Involuntary)	SYSTEM	NH	.	.	1	.	0	2.5	
Turnover, LPN (six month)	SYSTEM	NH	.	.	2	.	0	5	Banaszak-Holl et al. 1996. Factors associated with nursing home staff turnover. Gerontologist, 36(4), 512-517.
Turnover, LPN (Voluntary)	SYSTEM	NH	.	.	2	.	0	5	Donoghue et al. 2006. Voluntary and involuntary nursing home staff turnover. Res Aging, 28, 454-472.
Turnover, NA (Involuntary)	SYSTEM	NH	.	.	1	.	0	2.5	

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Turnover, NA (six month)	SYSTEM	NH	.	.	2	.	0	5	Banaszak-Holl et al. 1996. Factors associated with nursing home staff turnover. Gerontologist, 36(4), 512-517.
Turnover, NA (voluntary)	SYSTEM	NH	.	.	2	.	0	5	Donoghue et al. 2006. Voluntary and involuntary nursing home staff turnover. Res Aging 28, 454-472.
Turnover, RN (Involuntary)	SYSTEM	NH	.	.	1	.	0	2.5	
Turnover, RN (six month)	SYSTEM		.	.	2	.	0	5	Banaszak-Holl et al. 1996. Factors associated with nursing home staff turnover. Gerontologist, 36(4), 512-517.
Turnover, RN (voluntary)	SYSTEM	NH	.	.	2	.	0	5	Donoghue et al. 2006. Voluntary and involuntary nursing home staff turnover. Res Aging, 28, 454-472.
UCLA Loneliness Scale	PERSON	AL HOSPITAL	2	2	2	1	0	7	Russell. 1996. UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. J Person Assess, 66, 20-40.
Unnecessary Drug Use Measure	PERSON	NH	2	2	1	2	0	7	Suhrie et al. 2009. Impact of a geriatric nursing home palliative care service on unnecessary medication prescribing. Am J Geriatr Pharmacother, 7(1), 20-25.
Utrecht Work Engagement Scale (UWES-9)	PERSON	NH	2	2	2	1	0	7	Simpson. 2010. Development and psychometric evaluation of the Core Nurse Resource Scale. J Nurs Manag, 18(8), 1048-1059.
Work Environment	PERSON	NH	0	0	2	2	0	4	Probst et al. 2010. The relationship between workplace environment and job satisfaction among nursing assistants: findings from a national survey. J Am Med Dir Assoc, 11(4), 246-252.
Work Stress Inventory	PERSON	AL NH	2	0	2	1	0	5	Zimmerman et al. 2005. Attitudes, stress, and satisfaction of staff who care for residents with dementia. Gerontologist, 45(S), 96-105.
Workplace Violence Tool	PERSON	NH	2	0	2	2	0	6	Duncan et al. 2000. Violence against nurses. Alta RN, 56(2), 13-14.
Yeatts and Cready Dimensions of Empowerment Measure	PERSON	NH	1	0	2	2	0	5	Yeatts et al. 2004. Self-managed work teams in nursing homes: Implementing and empowering nurse aide teams. Gerontologist, 44, 256-261.

1 Refers to whether data are collected at the system or person (i.e., individual) level.
2 Settings may not be comprehensive.
3 Not applicable for measures. Overall, if any one of test-retest, inter-rater, or internal consistency reliability ≥.80, scored as 2 (good) ; if .60-.79, scored as 1 (fair); if <.60 or missing, scored as 0 (poor).   If no data exist, scored as 0, poor.
4 Not applicable for measures. Overall, if any one of convergent, discriminant, predictive, or concurrent validity ≥.60, scored as 2 (good) ; if .40-.59, scored as 1 (fair); if <.40 or missing, scored as 0 (poor).   If no data exist, scored as 0, poor.
5 If it is not time intensive to train/administer and has a simple scoring strategy, scored as 2 (good); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor).
6 Not applicable for measures. Extent to which it informs and captures actionable change in structures or processes (i.e., does not exhibit floor or ceiling effects), scored as 2 (good);); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor). If no data exist, scored as 0, poor. Of note, the extent to which something is "actionable" may be subjective/differ for different organizations.
7 Benchmarks for long-term are external (i.e., does not refer to comparing to oneself).
8 Total scores range from 0-10; higher scores reflect higher quality.
9 Citations are not provided for measures that are described and do not require a reference.

Table 2. Measures and Instruments, Person-Centered Care, by Score (n=22)

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Culture Change Scale (CCS)	48 items assessing six sub-scales: 1) system-wide culture change; 2) resident choice; 3) organizational design; 4) empowering supervision; 5) job design; and 6) decision-making. Sample items include "the environment of this facility encourages new ideas; how often can residents eat what they really want; my job duties allow me to enough time to do my job properly." Scores are provided on a 5 point Likert scale and mean scores are derived.	PROCESS	INSTRUMENT	48	STAFF	INTERVIEW	8
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Resident)	49 items to assess person-centered practices in assisted living and similar long-term care settings, addressing the domains of well-being and belonging (18 items), individualized care and services (12 items), social connectedness (10 items), and atmosphere (9 items). Items are scored on a 4 point Likert scale. Scores for each area and overall are obtained, with higher scores indicating more person-centeredness.	OUTCOME	INSTRUMENT	49	RESIDENT	QUESTIONNAIRE	8
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Staff)	62 items to assess person-centered practices in assisted living and similar long-term care settings, addressing the domains of workplace practices (23 items), social connectedness (16 items), individualized care and services (8 items), atmosphere (8 items), and caregiver-resident relationships (7 items). Items are scored on a 4 point Likert scale. Scores for each area and overall are obtained, with higher scores indicating more person-centeredness.	PROCESS	INSTRUMENT	62	STAFF	QUESTIONNAIRE	8
Duncan Choice Index	29 items rating the amount of choice regarding what, when, where, how, and with whom leisure and self-care activities are performed. Items are rated on a Likert scale of 1 (never a choice) to 5 (always a choice), a mean score is derived. Sample items include "what I wear, how I dress, when I use the telephone, whom I eat with, when I take medication, and when I eat.	PROCESS	INSTRUMENT	29	RESIDENT	QUESTIONNAIRE	7
Experience of Home Scale	25 items designed to measure the strength of the experience of a meaningful person-environment transaction. Items assess home (e.g., connected to people I love here), not home (e.g., cold and sterile), and boundary (e.g., have privacy). Responses use a 5 point Likert scale of strongly agree to strongly disagree, and the total score is the mean of all items.	OUTCOME	INSTRUMENT	25	RESIDENT	QUESTIONNAIRE	7
Person-Centered Climate Questionnaire	17 items assessing care environments that support residents' personhood in health-care settings. Items assess a climate of safety (e.g., approachable, responsive staff and well-organized environment), everydayness (e.g., homelike) and hospitality (e.g., welcoming). Items are scored on a 6 point Likert scale. The total score ranged from 17 to 102 with a high score indicating a climate that is very person-centered.	OUTCOME	INSTRUMENT	17	RESIDENT	QUESTIONNAIRE	7
Sheltered Care Environment Scale (Multiphasic Environmental Assessment Procedure)	63 items that measure social climate in congregate residential settings for the elderly, each rated yes/no. Taps perceptions of seven dimensions of the social environment regarding the quality of relationships, the personal growth orientation present, and maintenance and change of the social system.	OUTCOME	INSTRUMENT	63	RESIDENT	INTERVIEW	7

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Assisted Living Environmental Quality Scale (AL-EQS)	A summary scale comprised of 15 items from the TESS-NH/RC, reflecting facility maintenance, cleanliness, safety, lighting, physical appearance/homelikeness, orientation/cueing, privacy, resident appearance, and noise. Each of the 15 components is scored 0-2, with higher scores indicating better environmental quality. The composite ALEQS measure is a sum of the 15 components, which thus range from 0-30.	STRUCTURE	INSTRUMENT	15	OTHER	OBSERVATION	6
Lubben Social Network Scale – 6 item version	6 items measuring perceived social support received from family, friends, and neighbors (size, closeness, and frequency of contacts of a social network); the measure distinguishes between kin and non-kin. Each item is rated on Likert scale of 0-5, and a sum is derived (0-30) with higher scores indicating a stronger social network. This 6 item version was developed to meet clinician's needs for brevity.	PROCESS	INSTRUMENT	6	RESIDENT	QUESTIONNAIRE	6
Physical and Architectural Features Checklist (Multiphasic Environmental Assessment Procedure)	175 items that trained observers marks as either present or absent in an organization. These items are organized into 9 dimensions that represent physical amenities, social-recreational aids, prosthetic aids, orientational aids, safety features, architectural choice, space availability, staff facilities, and community accessibility.	STRUCTURE	INSTRUMENT	175	STAFF RESIDENT OTHER	INTERVIEW OBSERVATION	6
Therapeutic Environmental Screening Survey for Nursing Homes and Residential Care (TESS-NH/RC)	An observational instrument that describes the physical environment of long-term care settings. Areas assess maintenance, cleanliness, odors, safety, lighting, orientation/cueing, physical appearance/homelikeness/personalization, privacy, noises, plants, outdoor areas, residents' appearance, and access to the public toilet. Each item is rated on a Likert scale, and higher numbers are more favorable. A nursing home version also is available.	STRUCTURE	INSTRUMENT	31	OTHER	OBSERVATION	6
Artifacts of Culture Change	79 items reflecting structures and processes of care in six areas (care practices, environment, family/community, leadership, workplace practice, outcomes). Items receive scores based on cutpoints assigned for each item. The total number of points available is 580.	PROCESS	INSTRUMENT	79	STAFF	ABSTRACT OBSERVATION	5
Commonwealth Culture Change Survey	33 multi-part questions that assess three domains of culture change in nursing homes. These domains include resident care, staff culture, and working environment. Each item reported as a percent of all nursing home reporting various practices.	PROCESS	MEASURE		STAFF	QUESTIONNAIRE	5
Interaction Behavior Measure	Observational measure of 12 verbal and non-verbal caregiver behaviors (e.g., personal attending, relaxed, social touch, smiles); each is scored on a 7 point scale anchored by dimension-defining terms (e.g., for personal attending, the anchors are brief and lengthy).	PROCESS	INSTRUMENT	12	OTHER	OBSERVATION	5
Person-Centered Behavior Inventory (PCBI)	An observational measure of 11 verbal categories (e.g., shows approval, back-channel responses, and giving choices) and 8 nonverbal categories (e.g., resident-directed eye gaze, adjusting to resident's pace, and proximity) rated by coders within 30-second intervals in regard to whether or not the target behavior occurred. The proportion of time nurse aides used those behaviors is determined by dividing the total score by the total number of units.	PROCESS	INSTRUMENT	19	STAFF	OBSERVATION	5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Person-Directed Care Measure	50 items assessing person-directed care in relation to knowing the person, comfort care, autonomy, personhood, and support relations. Sample items include knowing residents' fears and worries, quickly helping the resident to the toilet, and spending time with animals as desired. Items scored on a 5 point Likert scale.	PROCESS	INSTRUMENT	50	STAFF	QUESTIONNAIRE	5
Policy and Program Information Form (POLIF; Multiphasic Environmental Assessment Procedure)	Unknown number of items that assess an organization's level of selectivity, expectations for functioning, tolerance for deviation, policy clarity, policy choice, resident control, provision for privacy, availability of health services, availability of daily living assistance, and availability of social recreational activities.	PROCESS	INSTRUMENT	.	STAFF	INTERVIEW	5
Lubben Social Network Scale – 18 item version	18 items measuring perceived social support received from family, friends, and neighbors (size, closeness, and frequency of contacts of a social network); the measure distinguishes between kin and non-kin. Each item is rated on Likert scale of 0-5, and a sum is derived (0-90) with higher scores indicating a stronger social network. This 18 item version is appropriate for social and health science research.	PROCESS	INSTRUMENT	18	RESIDENT	QUESTIONNAIRE	3
Lubben Social Network Scale – Revised Version	12 items measuring perceived social support received from family, friends, and neighbors (size, closeness, and frequency of contacts of a social network); the measure distinguishes between kin and non-kin. Each item is rated on Likert scale of 0-5, and a sum is derived (0-60) with higher scores indicating a stronger social network.	PROCESS	INSTRUMENT	12	RESIDENT	QUESTIONNAIRE	3
Preference Congruence Interview (Advancing Excellence)	16 items assessing satisfaction regarding how well daily preferences (8 items) and activity preferences (8 items) are met. Items refer to the Minimum Data Set (MDS) Section F Interview; the rating of satisfaction is a 3 point Likert scale.	OUTCOME	INSTRUMENT	16	RESIDENT	INTERVIEW	3
Structured Observation of Morning Care	Observation of the amount of choice offered to residents in four areas, assessing the quality of staff-resident communication: getting out of bed, toileting assistance/incontinence care, dressing, and dining location. Scoring assesses whether there was active choice, passive choice, or no choice. A more simple tool is available that does not distinguish active vs. passive choice.	PROCESS	INSTRUMENT	4	STAFF	OBSERVATION	3
Task Centered Behavior Inventory (TCBI)	A measure of caregiving interactions that includes two verbal categories: (a) caregiver's use of "verbally controlling" statements, such as ordering a resident to do something; and (b) caregiver's statements that take the speaking floor from the resident, labeled "interruption /changing topic." Nonverbal behaviors included nursing staff "ignoring" residents and "physically controlling" residents by forcing them physically to do something.	PROCESS	INSTRUMENT	3	STAFF	OBSERVATION	1

1 Total scores range from 0-10; higher scores reflect higher quality.

Table 2a. Measures and Instruments, Person-Centered Care, by Score (n=22)

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Culture Change Scale (CCS)	PERSON	NH	2	2	2	2	0	8	http://www.commonwealthfund.org/usr_doc/Grant_culturechangefor-profitnursinghome_1099.pdf
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Resident)	PERSON	AL	2	2	2	2	0	8	http://www.theceal.org/component/k2/item/download/287_50e76f0f81f241edd749a368f8f3f371
Toolkit for Person-Centeredness in Assisted Living (PC-PAL Staff)	PERSON	AL	2	2	2	2	0	8	http://www.theceal.org/component/k2/item/download/287_50e76f0f81f241edd749a368f8f3f371
Duncan Choice Index	PERSON	AL NH	2	1	2	2	0	7	Duncan-Myers et al. 2000. Relationship between choice and quality of life among residents in long-term care facilities. Am J Occup Ther, 54, 504-508.
Experience of Home Scale	PERSON	AL NH	2	2	2	1	0	7	Molony et al. 2007. Psychometric testing of an instrument to measure the experience of home. Res Nurs Health, 30, 518-530.
Person-Centered Climate Questionnaire	SYSTEM	NH HOSPITAL	2	1	2	2	0	7	Yoon et al. 2015. Person-centered climate questionnaire-patient in English: a psychometric evaluation study in long-term care settings. Arch Gerontol Geriat, 61, 81-87.
Sheltered Care Environment Scale (Multiphasic Environmental Assessment Procedure)	PERSON	NH	2	2	2	1	0	7	Lemke et al. 1987. Measuring the social climate of congregate residences for older people: Sheltered Care Environment Scale. Psychol Aging, 2(1), 20-29.
Assisted Living Environmental Quality Scale (AL-EQS)	SYSTEM	AL	2	2	0	2	0	6	http://www.unc.edu/depts/tessnh/tess_nh_rc_info.html
Lubben Social Network Scale – 6 item version	PERSON	AL NH OTHER	2	1	2	1	0	6	Lubben et al. 2006. Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. Gerontologist, 46(4), 503–513.
Physical and Architectural Features Checklist (Multiphasic Environmental Assessment Procedure)	SYSTEM	AL NH	2	2	0	2	0	6	Moos et al. 1980. Assessing the physical and architectural features of sheltered care settings. J of Gerontol, 35(4), 571-583.
Therapeutic Environmental Screening Survey for Nursing Homes and Residential Care (TESS-NH/RC)	SYSTEM	AL	2	2	0	2	0	6	http://www.unc.edu/depts/tessnh/pdf_files/Tess%20NHRC%20Revised%201_14_02.pdf
Artifacts of Culture Change	SYSTEM	NH	0	0	1	2	2	5	http://www.artifactsofculturechange.org/ACCTool/
Commonwealth Culture Change Survey	SYSTEM	NH	.	.	0	.	2	5	Doty et al. 2008. Culture change in nursing homes: How far have we come? Findings from the Commonwealth Fund 2007 National Survey of Nursing Homes. New York: The Commonwealth Fund.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Interaction Behavior Measure	PERSON	NH	2	2	0	1	0	5	Burgener et al. 1992. Caregiver and environmental variables related to difficult behaviors in institutionalized, demented elderly persons. J Gerontol, 47(4), 242-249.
Person-Centered Behavior Inventory (PCBI)	PERSON	NH	2	2	0	1	0	5	Wolcott et al. 2011. Measuring the person-centeredness of caregivers working with nursing home residents with dementia. Behav Ther, 42, 89-99.
Person-Directed Care Measure	PERSON	AL NH	1	1	1	2	0	5	White et al. 2008. Development and testing of a measure of person-directed care. Gerontologist, 48, 114-123.
Policy and Program Information Form (POLIF; Multiphasic Environmental Assessment Procedure)	SYSTEM	AL NH	0	1	2	2	0	5	Moos. 1996. Evaluating residential facilities: The Multiphasic Environmental Assessment Procedure. Thousand Oaks: Sage Publications.
Lubben Social Network Scale – 18 item version	PERSON	AL NH OTHER	0	0	2	1	0	3	Lubben et al. 2006. Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. Gerontologist, 46(4), 503–513.
Lubben Social Network Scale – Revised Version	PERSON	AL NH OTHER	0	0	2	1	0	3	Lubben et al. 2006. Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. Gerontologist, 46(4), 503–513.
Preference Congruence Interview (Advancing Excellence)	PERSON	NH	0	0	2	1	0	3	https://www.nhqualitycampaign.org/files/AE_PCC_implementation_guide_v1.10.pdf
Structured Observation of Morning Care	PERSON	NH	2	0	0	1	0	3	Simmons et al. 2011. Resident-directed long-term care: staff provision of choice during morning care. Gerontologist, 51(6), 867-875.
Task Centered Behavior Inventory (TCBI)	PERSON	NH	0	0	0	1	0	1	Lann-Wolcott et al. 2011. Measuring the person-centeredness of caregivers working with nursing home residents with dementia. Behav Ther, 42(1), 89-99.

1 Refers to whether data are collected at the system or person (i.e., individual) level.
2 Settings may not be comprehensive.
3 Not applicable for measures. Overall, if any one of test-retest, inter-rater, or internal consistency reliability ≥.80, scored as 2 (good) ; if .60-.79, scored as 1 (fair); if <.60 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.
4 Not applicable for measures. Overall, if any one of convergent, discriminant, predictive, or concurrent validity ≥.60, scored as 2 (good) ; if .40-.59, scored as 1 (fair); if <.40 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.
5 If it is not time intensive to train/administer and has a simple scoring strategy, scored as 2 (good); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor).
6 Not applicable for measures. Extent to which it informs and captures actionable change in structures or processes (i.e., does not exhibit floor or ceiling effects), scored as 2 (good);); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor). If no data exist, scored as 0, poor. Of note, the extent to which something is "actionable" may be subjective/differ for different organizations.
7 Benchmarks for long-term are external (i.e., does not refer to comparing to oneself).
8 Total scores range from 0-10; higher scores reflect higher quality.
9 Citations are not provided for measures that are described and do not require a reference.

Table 3. Measures and Instruments, Medication Management, by Score (n=24)

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Medication Reconciliation	Number of medication records reconciled of those admitted, transferred, or discharged divided by total number in that category.	PROCESS	MEASURE		CHART	ABSTRACT	10
Medication Tracking Tool (Advancing Excellence)	Six rates related to antipsychotic use in nursing home. Rate of residents on PRNs, for those with dementia, more than one antipsychotic, GDR attempted, GDR with dose reduction, GDR with med discontinued.	PROCESS	MEASURE		CHART	ABSTRACT	10
Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation	Percent of time staff performs medication reconciliation at admission and clinical handoffs.	PROCESS	MEASURE		CHART	ABSTRACT	10
Nursing Home Compare Percent of Residents Receiving Antipsychotic Medication (long-stay)		PROCESS	MEASURE		CHART	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Are Newly Administered Antipsychotic Medications (short-stay)		PROCESS	MEASURE		CHART	ABSTRACT	10
Medication Administration Practices (MAP)	48 items reflecting knowledge related to infection control, medication monitoring, medication regulation/documentation, medication administration, technique of administration, terminology, and charting and documentation. Higher scores indicate more knowledge.	PROCESS	INSTRUMENT	48	STAFF	QUESTIONNAIRE	7
Medication Quantification Scale	Quantifies medication use for people with chronic, nonmalignant pain. Scores are calculated for each medication based on weights to medication class and to dosage level, and are summed to provide a score. Medication class weights are aspirin=1, NSAID=2, antidepressant=2, muscle relaxant=3, benzodiazepines=4, weak narcotics=4; barbiturates/sedative=5, strong narcotics=6. Each is then multiplied by a dosage weight, and scores are added.	PROCESS	INSTRUMENT		CHART	ABSTRACT	7
Unnecessary Drug Use Measure	3 items assessing the appropriateness of drug use: lack of indication, lack of effectiveness, and therapeutic duplication, from the Medication Appropriateness Index (Mal). Each item is rated as appropriate, marginal, or inappropriate. Scoring indicates unnecessary drugs as determined by a continuous measure of the number of medications that lacked an indication, lacked effectiveness, or involved therapeutic duplication.	PROCESS	INSTRUMENT	3	STAFF	ABSTRACT	7
Medication Appropriateness Index	10 items rated 1 (indicated) to 3 (not indicated), related to each medication being taken: medication indication, effectiveness, dosage, directions, drug-drug interactions, drug-disease interactions, practicality, duplication, expense, and treatment duration. Generally used to flag problems, but a score can be created from 0 (no item inappropriate) to 30 (all items inappropriate).	PROCESS	INSTRUMENT	10	CHART	ABSTRACT	5
Number of Non-Prescription Medications		PROCESS	MEASURE		CHART	ABSTRACT	5
Number of Prescription Medications		PROCESS	MEASURE		CHART	ABSTRACT	5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Percent of people receiving anxiolytic medication		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of people receiving hypnotic medication		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of people receiving medication for depression		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of people with adverse drug reaction to opioid		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of resident with polypharmacy (>9 medications)		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents aged 65 or older who had a medication review within last year		PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of residents discharged from SNF who received reconciled medication list at discharge		PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of residents for whom a professional has documented a list of all current medications		PROCESS	MEASURE		CHART	INTERVIEW	5
Percent of residents on medication for pain with complementary treatment		PROCESS	MEASURE		RECORDS	ABSTRACT	5
Percent of residents receiving antipsychotic with no evidence of psychotic disorder		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with adverse reactions related to pain medications in LTC		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with controlled adverse reactions related to pain medications in LTC		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with severe opioid-related constipation or fecal impaction		OUTCOME	MEASURE		CHART RECORDS	OTHER	5

1 Total scores range from 0-10; higher scores reflect higher quality.

Table 3a. Measures and Instruments, Medication Management, by Score (n=24)

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Medication Reconciliation	SYSTEM	HOSPITAL	.	.	2	.	2	10	http://www.ihi.org/resources/Pages/Publications/Medicationreconciliation.aspx
Medication Tracking Tool (Advancing Excellence)	SYSTEM	NH	.	.	2	.	2	10	https://www.nhqualitycampaign.org/files/tools/AE_MedicationTrackingToolInstructions_9-24-13.pdf
Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation	SYSTEM	HOSPITAL	.	.	2	.	2	10	http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/match/index.html
Nursing Home Compare Percent of Residents Receiving Antipsychotic Medication (long-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.medicare.gov/NursingHomeCompare/About/Long-Stay-Residents.html
Nursing Home Compare Percent of Residents Who Are Newly Administered Antipsychotic Medications (short-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.medicare.gov/NursingHomeCompare/About/Short-Stay-Residents.html
Medication Administration Practices (MAP)	PERSON	AL	2	1	2	2	0	7	Zimmerman et al. 2011. Medication administration errors in assisted living: scope, characteristics, and the importance of staff training. J Am Geriatr Soc, 59(6), 1060-1068.
Medication Quantification Scale	PERSON	NH HOSPICE	2	2	1	2	0	7	Steedman et al. 1992. Chronic pain medications: Equivalence levels and method of quantifying usage. Clin J Pain, 8, 204-214.
Unnecessary Drug Use Measure	PERSON	NH	2	2	1	2	0	7	Suhrie et al. 2009. Impact of a geriatric nursing home palliative care service on unnecessary medication prescribing. Am J Geriatr Pharmacother, 7(1), 20-25.
Medication Appropriateness Index	PERSON	NH HOSPITAL	2	0	1	2	0	5	Hanlon et al. 1992. A method for assessing drug therapy appropriateness. J. Clin. Epidemiol, 45, 1045-1051.
Number of Non-Prescription Medications	PERSON	AL NH	.	.	2	.	0	5	
Number of Prescription Medications	PERSON	AL NH	.	.	2	.	0	5	
Percent of people receiving anxiolytic medication	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of people receiving hypnotic medication	SYSTEM	AL NH	.	.	2	.	0	5	

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Percent of people receiving medication for depression	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of people with adverse drug reaction to opioid	SYSTEM	HOSPITAL	.	.	2	.	0	5	Lazarou et al. 1998. Incidence of adverse drug reactions in hospitalized patients: A meta-analysis of prospective studies. JAMA, 279(15), 1200-1205.
Percent of resident with polypharmacy (>9 medications)	SYSTEM	NH	.	.	2	.	0	5	Dwyer et al. 2010. Polypharmacy in nursing home residents in the United States: Results of the 2004 National Nursing Home Survey. Am J Geriatr Pharmacothe, 8(1), 63-72.
Percent of residents aged 65 or older who had a medication review within last year	SYSTEM	NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=48813
Percent of residents discharged from SNF who received reconciled medication list at discharge	SYSTEM	NH HOSPITAL OTHER	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=28107
Percent of residents for whom a professional has documented a list of all current medications	SYSTEM	NH DOCTOR	.	.	2	.	0	5	https://www.apta.org/uploadedFiles/APTAorg/Payment/Medicare/Pay_for_Performance/PQRS/2015/PQRS2015Measure130CurrentMedications.pdf
Percent of residents on medication for pain with complementary treatment	SYSTEM	AL NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=48247&search=Medication+Therapy+Management+
Percent of residents receiving antipsychotic with no evidence of psychotic disorder	SYSTEM	OTHER	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=47514
Percent of residents with adverse reactions related to pain medications in LTC	SYSTEM	AL NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=48255
Percent of residents with controlled adverse reactions related to pain medications in LTC	SYSTEM	AL NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=48256
Percent of residents with severe opioid-related constipation or fecal impaction	SYSTEM	AL NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=48259

1 Refers to whether data are collected at the system or person (i.e., individual) level.
2 Settings may not be comprehensive.
3 Not applicable for measures. Overall, if any one of test-retest, inter-rater, or internal consistency reliability ≥.80, scored as 2 (good) ; if .60-.79, scored as 1 (fair); if <.60 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.
4 Not applicable for measures. Overall, if any one of convergent, discriminant, predictive, or concurrent validity ≥.60, scored as 2 (good) ; if .40-.59, scored as 1 (fair); if <.40 or missing, scored as 0 (poor).   If no data exist, scored as 0, poor.
5 If it is not time intensive to train/administer and has a simple scoring strategy, scored as 2 (good); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor).
6 Not applicable for measures. Extent to which it informs and captures actionable change in structures or processes (i.e., does not exhibit floor or ceiling effects), scored as 2 (good);); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor). If no data exist, scored as 0, poor. Of note, the extent to which something is "actionable" may be subjective/differ for different organizations.
7 Benchmarks for long-term are external (i.e., does not refer to comparing to oneself).
8 Total scores range from 0-10; higher scores reflect higher quality.
9 Citations are not provided for measures that are described and do not require a reference.

Table 4. Measures and Instruments, Care Coordination/Transitions, by Score (n=32)

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Care Transitions Measure (CTM-15 and CTM-3)	15 items assessing care transitions in relation to goals, potential health care needs, site of care, information, understanding, warning signs and symptoms, written plan of care, self-care, confidence, and purpose, side effects, and administration of medications. Items are scored on a 4 point Likert scale. A 3 item version is available and recommended for public reporting.	OUTCOME	INSTRUMENT	15	RESIDENT	INTERVIEW	8
Decision Satisfaction Inventory (DSI)	15 items assessing satisfaction with medical decision-making in two domains: the process and the decision. Items related to the process include the degree to which family felt involved, the support and reassurance provided by health care professionals, the amount of information received, and the level of interest, attention and time spent by the health care professional. Responses are provided on a 5 point Likert scale. The total and subscale scores reflect the summation of items transformed onto a scale from 0–100 with higher scores reflecting greater satisfaction.	OUTCOME	INSTRUMENT	15	FAMILY	INTERVIEW	8
Family Perception of Physician-Family Caregiver Communication (FPPFC)	7 items assessing family perceptions of communication between physicians and family caregivers of individuals who spent their last month of life in long-term care. Sample items include "the doctor always spoke to you, other family caregivers, or the resident about [his/her] wishes for medical treatment at the end of life, and the doctor always kept you or other family caregivers informed about the resident's condition. Items are scored on a 4 point Likert scale and a mean score is derived.	PROCESS	INSTRUMENT	7	FAMILY	INTERVIEW	6
Avoidable Rehospitalization Rate, 30-day Adjusted (and annualized)	The number of unplanned readmissions to any hospital divided by the number of hospitalizations in that period, adjusted for patient characteristics.	OUTCOME	MEASURE		CHART	ABSTRACT	5
Number of Hospital days		OUTCOME	MEASURE		CHART	ABSTRACT	5
Number of Hospital Transfers		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of hospice residents screened for dyspnea during admission evaluation		PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of hospice residents screened for dyspnea treated for dyspnea within 24 hours of treatment		PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of hospice residents screened for pain during admission assessment		PROCESS	MEASURE		CHART RECORDS	OTHER	5
Percent of hospice residents screened positive for pain who received clinical assessment within 24 hours		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of hospice residents with chart documentation of preferences for life sustaining treatments		PROCESS	MEASURE		CHART RECORDS	OTHER	5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Percent of people discharged to home, hospice, acute care, or other health care facility		OUTCOME	MEASURE		CHART	ABSTRACT	5
Percent of residents aged 65 or older with advance care plan		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents discharged from SNF for whom a transition record was submitted to facility or physician within 24 hours of discharge		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents discharged from SNF who visited physician within 60 days and had medication reconciliation		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents for whom care plan is created at admission		PROCESS	MEASURE		RESIDENT	INTERVIEW	5
Percent of residents for whom care plan is updated annually		PROCESS	MEASURE		RESIDENT	INTERVIEW	5
Percent of residents for whom care plan is updated at status change		PROCESS	MEASURE		RESIDENT	INTERVIEW	5
Percent of residents for whom care plan is updated quarterly		PROCESS	MEASURE		RESIDENT	INTERVIEW	5
Percent of residents on hospice		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents who have a Do Not Resuscitate (DNR) order documented		PROCESS	MEASURE		CHART		5
Percent of residents who have advance care plan in medical record		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents with Medical Order for Life Sustaining Treatment (MOLST) completed		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents with Medical Orders for Scope of Treatment (MOST) completed		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of Residents with Physician Order for Life-Sustaining Treatment (POLST) Completed		PROCESS	MEASURE		CHART	ABSTRACT	5
Rehospitalization Measure, 30-Day Risk Adjusted (AHCA)	Risk adjusted rate calculated as [(actual rehospitalization / expected rehospitalization) x national average]	PROCESS	MEASURE		CHART	ABSTRACT	5
Safely Reduce Hospitalizations Tracking Tool (Advancing Excellence)	Tracking tool that generates rates of readmissions and transfers, as well as information about related processes and reason for transfer.	PROCESS	MEASURE		CHART	ABSTRACT	5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Skilled Nursing Facility Readmission Measure: All Cause Risk Standardized Readmission Measure	A ratio reflecting the risk-adjusted estimate of the number of SNF stays with unplanned readmissions that occurred within 30 days of discharge from the prior acute hospitalization, after accounting for exclusions.	OUTCOME	MEASURE		CHART	ABSTRACT	5
Adverse Reactions to Care Scale	8 observational items meant to assess triggers during transitions in care in the context of adverse reactions to care activities (bathing, toileting, taking medications, care from health care professionals) and to care environments (being alone, being around strangers, loud noises, darkness/bright lighting). Each is asked in relation to how often difficult or bad reactions are experienced for each, using a 4 point Likert scale of frequency.	OUTCOME	INSTRUMENT	8	FAMILY	OBSERVATION	3
Emergency Department Visit per 'X' resident days		OUTCOME	MEASURE		CHART	ABSTRACT	2.5
Hospitalizations per 'X' resident days		OUTCOME	MEASURE		CHART	ABSTRACT	2.5
Rehospitalizations per 'X' resident days		OUTCOME	MEASURE		CHART	ABSTRACT	2.5

1 Total scores range from 0-10; higher scores reflect higher quality.

Table 4a. Measures and Instruments, Care Coordination/Transitions, by Score (n=32)

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Care Transitions Measure (CTM-15 and CTM-3)	PERSON	HOSPITAL	2	2	2	2	0	8	http://www.gchc.org/wp-content/uploads/2012/08/CTM-15.pdf
Decision Satisfaction Inventory (DSI)	PERSON	NH	2	2	2	2	0	8	Givens et al. 2009. Health care proxies of nursing home residents with advanced dementia: decisions they confront and their satisfaction with decision-making. Am Geriatr Soc, 57(7), 1149–1155.
Family Perception of Physician-Family Caregiver Communication (FPPFC)	PERSON	AL NH	2	0	2	2	0	6	Biola et al. 2007. Physician communication with family caregivers of long-term care residents at the end of life. J Am Geriatr Soc, 55, 846–856.
Avoidable Rehospitalization Rate, 30-day Adjusted (and annualized)	SYSTEM	NH HOSPITAL	.	.	0	.	2	5	
Number of Hospital days	SYSTEM	AL NH	.	.	2	.	0	5	
Number of Hospital Transfers	SYSTEM	NH	.	.	2	.	0	5	Fried et al. 1997. Frailty and hospitalizational of long-term stay nursing home residents. J Am Geriatr Soci, 45(3), 265-269.
Percent of hospice residents screened for dyspnea during admission evaluation	SYSTEM	HOSPICE HOSPITAL	.	.	2	.	0	5	Schenck et al. 2010. The Peace project: identification of quality measures for hospice and palliative care. J Palliat Med, 13(12), 1451-1459.
Percent of hospice residents screened for dyspnea treated for dyspnea within 24 hours of treatment	SYSTEM	HOSPICE	.	.	2	.	0	5	Schenck et al. 2010. The Peace project: identification of quality measures for hospice and palliative care. J Palliat Med, 13(12), 1451-1459.
Percent of hospice residents screened for pain during admission assessment	SYSTEM	HOSPICE HOSPITAL	.	.	2	.	0	5	Schenck et al. 2010. The Peace project: identification of quality measures for hospice and palliative care. J Palliat Med, 13(12), 1451-1459.
Percent of hospice residents screened positive for pain who received clinical assessment within 24 hours	SYSTEM	HOSPICE HOSPITAL	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=36950
Percent of hospice residents with chart documentation of preferences for life sustaining treatments	SYSTEM	HOSPICE HOSPITAL	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=36953

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Percent of people discharged to home, hospice, acute care, or other health care facility	SYSTEM	HOSPITAL	.	.	2	.	0	5	https://manual.jointcommission.org/releases/TJC2013A/DataElem0537.html
Percent of residents aged 65 or older with advance care plan	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of residents discharged from SNF for whom a transition record was submitted to facility or physician within 24 hours of discharge	SYSTEM	NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/hhs/content.aspx?id=1787#.VnH2CL-fKsI
Percent of residents discharged from SNF who visited physician within 60 days and had medication reconciliation	SYSTEM	NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=28107
Percent of residents for whom care plan is created at admission	SYSTEM	AL	.	.	2	.	0	5	
Percent of residents for whom care plan is updated annually	SYSTEM	AL	.	.	2	.	0	5	
Percent of residents for whom care plan is updated at status change	SYSTEM	AL	.	.	2	.	0	5	
Percent of residents for whom care plan is updated quarterly	SYSTEM	AL	.	.	2	.	0	5	
Percent of residents on hospice	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of residents who have a Do Not Resuscitate (DNR) order documented	SYSTEM	NH	.	.	2	.	0	5	Manu et al. 2015. Advance directives and care received by older nursing home residents. Am J Hosp Palliat Care. Epub ahead of print. Oct 22. Pii: 1049909115611875. [Epub ahead of print]
Percent of residents who have advance care plan in medical record	SYSTEM	NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=28108
Percent of residents with Medical Order for Life Sustaining Treatment (MOLST) completed	SYSTEM	AL NH HOSPICE HOSPITAL DOCTOR	.	.	2	.	0	5	http://marylandmolst.org/docs/MOLST%20MM3%202013%20FINAL%20PROPOSED%2072613%20POSTED%2021714-no-instructions.pdf

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Percent of residents with Medical Orders for Scope of Treatment (MOST) completed	SYSTEM	AL NH HOSPICE HOSPITAL DOCTOR	.	.	2	.	0	5	http://www.polst.org/wp-content/uploads/2012/12/NC-MOST-Form.pdf
Percent of Residents with Physician Order for Life-Sustaining Treatment (POLST) Completed	SYSTEM	AL NH HOSPICE HOSPITAL	.	.	2	.	0	5	
Rehospitalization Measure, 30-Day Risk Adjusted (AHCA)	SYSTEM	NH	.	.	0	.	2	5	http://www.ahcancal.org/research_data/trendtracker/Documents/Rehospitalization%20Help%20Doc.pdf
Safely Reduce Hospitalizations Tracking Tool (Advancing Excellence)	SYSTEM	NH	.	.	2	.	0	5	https://www.nhqualitycampaign.org/goalDetail.aspx?g=hosp#tab2
Skilled Nursing Facility Readmission Measure: All Cause Risk Standardized Readmission Measure	SYSTEM	NH	.	.	0	.	2	5	Centers for Medicare and Medicaid Services. 2015. Skilled Nursing Facility Readmission Measure: All Cause Risk Standardized Readmission Measure: Draft Technical Report. Available at https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Downloads/SNFRM-Technical-Report-3252015.pdf
Adverse Reactions to Care Scale	PERSON	AL NH OTHER	2	0	0	1	0	3	Anderson et al. 2014. The adverse reactions to care scale: identifying and measuring triggers during transitions in care. J Gerontol Nurs, 40(2), 21-25.
Emergency Department Visit per 'X' resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
Hospitalizations per 'X' resident days	SYSTEM	NH	.	.	1	.	0	2.5	
Rehospitalizations per 'X' resident days	SYSTEM	NH	.	.	1	.	0	2.5	

1 Refers to whether data are collected at the system or person (i.e., individual) level.
2 Settings may not be comprehensive.
3 Not applicable for measures. Overall, if any one of test-retest, inter-rater, or internal consistency reliability ≥=.80, scored as 2 (good) ; if .60-.79, scored as 1 (fair); if <.60 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.
4 Not applicable for measures. Overall, if any one of convergent, discriminant, predictive, or concurrent validity ≥=.60, scored as 2 (good) ; if .40-.59, scored as 1 (fair); if <.40 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.
5 If it is not time intensive to train/administer and has a simple scoring strategy, scored as 2 (good); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor).
6 Not applicable for measures. Extent to which it informs and captures actionable change in structures or processes (i.e., does not exhibit floor or ceiling effects), scored as 2 (good);); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor). If no data exist, scored as 0, poor. Of note, the extent to which something is "actionable" may be subjective/differ for different organizations.
7 Benchmarks for long-term are external (i.e., does not refer to comparing to oneself).
8 Total scores range from 0-10; higher scores reflect higher quality.
9 Citations are not provided for measures that are described and do not require a reference.

Table 5. Measures and Instruments, Resident/Patient Outcomes, by Score (n=69)

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Nursing Home Compare (MDS) Percent of Residents Who Self-Report Moderate to Severe Pain (long- and short-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of High Risk Residents With Pressure Ulcers (long- and short-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Low Risk Residents Who Lose Control of Their Bowels or Bladder (long-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (long- and short-stay)		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (long- and short-stay)		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Experiencing One or More Falls With Major Injury (long-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Have Depressive Symptoms (long-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder (long-stay)		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Lost Too Much Weight (long-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Who Were Physically Restrained (long-stay)		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents Whose Need for Help With ADLs Has Increased (long-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents With a Urinary Tract Infection (long-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10
Nursing Home Compare Percent of Residents With Pressure Ulcers that are New or Worsened (short-stay)		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	10

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
CORE-Q	4 satisfaction questions: (1) In recommending this facility to your friends and family, how would you rate it overall? (2) Overall, how would you rate the staff? (3) How would you rate the care you receive? (4) Overall, how would you rate the food?	OUTCOME	INSTRUMENT	4	RESIDENT	INTERVIEW	9
Activities of Daily Living Unmet Need	Receipt of assistance (hand-on or supervisory/standby) for difficulty performing any of seven activities of daily living due to a health or physical problem: (a) bathing or showering; (b) dressing; (c) eating; (d) getting in and out of bed or chairs (i.e., transferring); I walking; (f) getting outside; and (g) using the toilet, including getting to the toilet. No or insufficient assistance indicates unmet need.	OUTCOME	INSTRUMENT	14	CHART RESIDENT	ABSTRACT INTERVIEW	8
Alzheimer's Disease Related Quality of Life (ADRQL)	40 item research instrument used to assess health-related quality of life in persons with Alzheimer's disease and other dementias. Domains include social interaction (12 items), awareness of self (8 items), feelings and mood (12 items), enjoyment of activities (4 items) and response to surroundings (4 items). Each item is scored agree/disagree and a total is converted ranging up to 100 points. A shorter revised form is recommended.	OUTCOME	INSTRUMENT	40	FAMILY	INTERVIEW	8
Assisted Living Resident Satisfaction Scale (ALRSS)	18 items assessing satisfaction in 9 areas: safety/peace of mind, personal attention, staff, knowledge, autonomy, aides, socialization with family, privacy, and activities. Items are scored on a 4 point Likert scale. A family version also exists, which included 18 items assessing satisfaction in five areas: staff responsiveness, transportation, activities, family member impact, and resident responsibilities.	OUTCOME	INSTRUMENT	18	RESIDENT FAMILY	QUESTIONNAIRE	8
Ohio Nursing Home Family Satisfaction Survey (2012)	48 satisfaction items assessing 13 domains: admissions; social services; activities; choice; receptionist and phone; direct care and nurse aides; therapy; administration; meals and dining; laundry; resident environment; family environment; and general questions. Sample items include "does the social worker treat you with respect; are the nurse aides gentle; and does the facility seem homelike? Items are scored on a 4 point Likert scale, with higher scores reflecting more satisfaction.	OUTCOME	INSTRUMENT	48	FAMILY	QUESTIONNAIRE	8
Ohio Nursing Home Resident Satisfaction Survey	51 items assessing satisfaction with activities, environment, food, clinical care, personal care, non-clinical staff services, privacy/autonomy, administration, and an overall assessment. Items are scored on a 4 point Likert scale in terms of frequency.	OUTCOME	INSTRUMENT	51	RESIDENT	INTERVIEW	8
Quality of Life in Late-Stage Dementia (QUALID)	11 items assessing the quality of life in persons with late-stage Alzheimer's disease and other dementing illnesses over the last 7 days. Sample items relate to smiling, appearing physically uncomfortable, and enjoying eating. Items are scored on a 5 point Likert scale related to frequency. The total score is summed, and lower scores reflect a better quality of life.	OUTCOME	INSTRUMENT	11	STAFF FAMILY	INTERVIEW	8
Satisfaction With Care at the End of Life in Dementia (SWC-EOLD)	10 items assessing satisfaction with care at the end-of-life for persons with dementia. Sample items include "I feel that my care recipient got all necessary nursing assistance; I felt fully involved in decision making; I felt that all medication issues were clearly explained to me." Items are rated on a 4 point Likert scale, with higher scores indicating more satisfaction.	OUTCOME	INSTRUMENT	10	FAMILY	INTERVIEW	8

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
CAHPS Nursing Home Resident Survey: Discharged Resident Instrument	Proportion of discharged residents who highly rated nursing home services such as meals, temperature, cleanliness, feelings of security, pain treatment, staff, therapy, noise, privacy, choice, activities, and others.	OUTCOME	MEASURE		RESIDENT	QUESTIONNAIRE	7.5
Falls per 'X' resident days		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Falls With Death per 'X' resident days		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Falls With Major Injury per 'X' resident days		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Falls With Minor Injury per 'X' resident days		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Falls With Moderate Injury per 'X' resident days		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	7.5
Measurement Tool for Clinical Practice Guideline Implementation: Measures for Falls and Fall Risk	Rates of clinical and clinical outcome measures related to falls that address domains of falls recognition, assessment, treatment, monitoring, and outcomes.	PROCESS	MEASURE		CHART	ABSTRACT	7.5
Mobility Tracking Tool (Advancing Excellence)	Calculates several outcomes based on MDS items. A set of eight mobility items is used to construct two composite scores for each resident: Personal Movement Score, and Life Space Mobility Score. Tracks the percent of residents assessed and percent of those with stable or improved mobility.	OUTCOME	MEASURE		CHART	ABSTRACT	7.5
Dementia Quality of Life Instrument (DQOL)	29 items assessing 5 subscales meant to assess the subjective experience of dementia: self-esteem, positive affect/humor, negative affect, feelings of belonging, and sense of aesthetics. Sample items ask about feelings of confidence, happiness, frustration, being useful, and enjoying music. Each item is scored on a 4 point Likert scale, and scores are computed by averaging responses to the items that comprise that subscale.	OUTCOME	INSTRUMENT	29	RESIDENT	INTERVIEW	7
End of Life in Dementia – Comfort Assessment in Dying (EOLD-CAD)	14 items assessing symptoms and comfort during the last week of life, with subscales related to physical distress, emotional distress, well-being, and dying symptoms. Scores use a 3 point Likert scale and range from 14-42, with higher scores indicating better symptom control.	OUTCOME	INSTRUMENT	14	FAMILY	INTERVIEW QUESTIONNAIRE	7
Numeric Rating Scale for Pain	1 item measure of pain intensity in adults. The intensity of pain is scored using a 0-10 rating scale anchored by terms describing pain intensity. A rating is given for the intensity of pain experienced in the last 24 hours.	OUTCOME	INSTRUMENT	1	RESIDENT	QUESTIONNAIRE	7
Ohio Nursing Home Family Satisfaction Survey	62 satisfaction items assessing 13 domains: admissions; social services; activities; choice; receptionist and phone; direct care and nurse aides; professional nurses; therapy; administration; meals and dining; laundry; environment; and general questions. Sample items include "does the social worker treat you with respect; are the nurse aides gentle; and does the facility seem homelike? Items are scored on a 4 point Likert scale, with higher scores reflecting more satisfaction.	OUTCOME	INSTRUMENT	62	FAMILY	QUESTIONNAIRE	7

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Pleasant Events Schedule Nursing Home (PES-NH)	30 daily activities available in nursing homes, rated in relation to the extent to which activities were offered and available during the last month, each scored on a 3 point Likert scale, as well as the extent to which the resident enjoys the activity now and in the past. Sample activities include sitting, walking, or rolling wheelchair outside, laughing, wearing favorite clothes, and grooming. The sum represents the frequency of these activities during the last month. The instrument is intended to be used in the context of behavioral or cognitive–behavioral therapy for depression.	OUTCOME	INSTRUMENT	30	RESIDENT	QUESTIONNAIRE	7
Purpose in Life Test (PIL)	20 item attitude instrument assessing the extent to which someone experiences a sense of meaning and purpose in life. Items are rated on a seven point Likert scale. Sample items include "Life to me seems always exciting" and "If I could choose I would like nine more lives just like this one." Scores range from 0 to 120; higher scores indicate greater purposefulness.	OUTCOME	INSTRUMENT	20	RESIDENT	QUESTIONNAIRE	7
Satisfaction with Life Scale (SWLS)	5 items designed to measure global cognitive judgments of satisfaction with one's life. Items include my life is close to ideal, the conditions of my life are excellent, I am satisfied with my life, I have gotten the important things I want in life; if I could live my life over, I would change almost nothing. Items are scored on a 7 point Likert scale.	OUTCOME	INSTRUMENT	5	RESIDENT	QUESTIONNAIRE	7
Short Pleasant Events Schedule for Alzheimer's Disease (PES-AD)	20 items rated in relation to the extent to which activities were offered and available during the last month, each scored on a 3 point Likert scale, as well as the extent to which the resident enjoys the activity now and in the past. Sample activities include being outside, laughing, exercising, and grooming. The sum represents the frequency of these activities during the last months. The instrument is intended to be used in the context of behavioral or cognitive–behavioral therapy for depression.	OUTCOME	INSTRUMENT	20	RESIDENT FAMILY	QUESTIONNAIRE	7
Social Provisions Scale (SPA)	24 items assessing social provisions in six areas: attachment, social integration, opportunity of nurturance, reassurance of worth, guidance, reliable alliance, each scored on a four point Likert scale. Subtotal scores are obtained for each subscale. A higher scores indicates more perceived support.	OUTCOME	INSTRUMENT	24	RESIDENT	INTERVIEW	7
Subjective Happiness Scale	4 items assessing subjective happiness, each scored on a 7 point Likert scale: I consider myself to be not very happy to very happy; compared to others I consider myself less happy to more happy; the extent to which the person is very happy regardless what is going on; and the extent to which they are not very a happy depending what is going on. The total score is the mean score of all four items.	OUTCOME	INSTRUMENT	4	RESIDENT	QUESTIONNAIRE	7
UCLA Loneliness Scale	20 items reflecting subjective feelings of loneliness and also feelings of social isolation. Responses are on a four point Likert scale, ranging from never too often. Sample items include "I have nobody to talk to; I feel left out; people are around me but not with me." Scores are summed, with higher scores indicating more loneliness. (Other versions with reverse scored items and simplified wording are available.)	OUTCOME	INSTRUMENT	20	STAFF RESIDENT	INTERVIEW QUESTIONNAIRE	7

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Control, Autonomy, Self-realization, Pleasure-19 (CASP-19)	19 items assessing quality-of-life in 4 area: control, autonomy, pleasure and self-realization. Sample items include "my age prevents me from doing the things I would like to do; I feel left out of things; I look forward to each day." Items are scored on a 4 point Likert scale, totaling 0–57, with higher scores representing better quality of life. The shorter CASP-12 is recommended because it has better psychometric properties, but even that requires further modification and testing.	OUTCOME	INSTRUMENT	19	RESIDENT	QUESTIONNAIRE	6
End of Life in Dementia – Symptom Management	9 items assessing the frequency of symptoms and signs during the past 90 days: pain, shortness of breath, depression, fear, anxiety, agitation, calm, skin breakdown, resistance to care. Scores use a 6 point Likert scale ranging from 0-5; scores are summed and range from 0-45 with higher scores indicating better symptom control.	OUTCOME	INSTRUMENT	9	FAMILY	INTERVIEW QUESTIONNAIRE	6
Hospice Quality of Life Index	25 satisfaction items related to physical well-being (e.g., pain relief), psychological-spiritual well-being (e.g., anxiety about self), social well-being (e.g., physical contact with others), and financial well-being (e.g., worry about the cost of medical care). Each item has 0-100 points, and each is weighted by its perceived importance on a 0-3 scale; each item can thus range between 0-300.	OUTCOME	INSTRUMENT	25	RESIDENT	INTERVIEW	6
Nursing Facility Family Satisfaction Questionnaire	20 items assessing satisfaction related to admission, activities, autonomy and privacy, physical environment, safety and security, caregivers, meals/food, and general satisfaction. Sample items include "whether your family member has enough things to do, enough privacy, and how safe the family member feels." Items are rated 0-10, ranging from very poor to excellent.	OUTCOME	INSTRUMENT	20	FAMILY	QUESTIONNAIRE	6
Pleasant Events Schedule	66 items that people tend to find pleasant, each rated how often it occurred in the last month (0 times, 1-6 times, 7 or more times) and how pleasant it was or would have been, rated on a 3 point Likert scale. Items reflect five subscales: socializing, relaxing, contemplating, being effective, and doing things. A total score or individual scale scores can be derived.	OUTCOME	INSTRUMENT	66	RESIDENT	QUESTIONNAIRE	6
Quality of Life in Dementia	15 items assessing quality of life for people with dementia. Measures are of the frequency, opportunity, and enjoyment of 15 activities (not related to activities of daily living) over one week, potentially within the capacity of a person with dementia. Responses are on a 3 point Likert scale. A summary score is obtained, ranging from 0 to 30, with higher scores indicating more activity.	OUTCOME	INSTRUMENT	15	RESIDENT	INTERVIEW	6
Quality of Life Index-Nursing Home Version	66 items, composed of 33 discrete items rated in terms of satisfaction and importance. Sample items relate to health, health care, pain, emotional support, education, and personal goals. Each item is rated on a 7 point Likert scale.	OUTCOME	INSTRUMENT	66	RESIDENT	QUESTIONNAIRE	6

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Quality of Life Scale (QOLS)	16 items assessing quality of life in terms of material and physical well-being; relationships with other people; social, community, and civic activities; personal development and fulfillment; and recreation. Sample items relate to health, having and raising children, and socializing. Items are rated on a 7 point Likert scale, and summed to create a total score.	OUTCOME	INSTRUMENT	16	RESIDENT	QUESTIONNAIRE	6
Resident Satisfaction Index	27 items representing resident perceptions of health care, housekeeping services, physical environment, relationships with staff, and social life/activities. Each item is scored yes/no. A shorter 6 item measure also has been used.	OUTCOME	INSTRUMENT	27	RESIDENT	INTERVIEW	6
Rutgers Satisfaction Assessment Tool – Nursing Home Resident	44 items scored on 1-10 visual analog scale assess cognitively intact nursing home resident's satisfaction with activities, environment, food, personal care, and overall experience.	OUTCOME	INSTRUMENT	44	RESIDENT	INTERVIEW	6
Toolkit of Instruments to Measure End-of-Life Care—After Death Bereaved Family Member Interview	36 items assessing whether end-of-life care meets the expectations and needs of the dying person and their family in 8 areas: informing and making decisions, advance care planning, closure, coordination, achieving control and respect, family emotional support, self-efficacy, and ratings of patient focused/family centered care. Scores are summed and constitute problem scores that indicate concerns regarding the quality of care.	OUTCOME	INSTRUMENT	36	FAMILY	INTERVIEW	6
Palliative Care Outcome Scale	10 items for patients with advanced cancer and their families that assess more than physical symptoms and quality of life; items assess pain, other symptoms, patient anxiety, family anxiety, information, support, life worthwhile, self-worth, wasted time, and personal affairs. Items are scored on a 5 point Likert scale and summed; higher scores indicate more need.	OUTCOME	INSTRUMENT	10	RESIDENT	QUESTIONNAIRE	5
Percent of residents screened for future fall risk at least once a year		PROCESS	MEASURE		CHART	ABSTRACT	5
Percent of residents with a history of falls screened for future fall risk at least once a year		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with a history of falls who have a plan of care for fall documented		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with in-house acquired pressure ulcers		OUTCOME	MEASURE		CHART RECORDS	ABSTRACT	5
Percent of residents with persistent indicators of dementia and no diagnosis (long and short stay)		PROCESS	MEASURE		CHART RECORDS	ABSTRACT	5
Perceptions of Pain Management	5 items related to resident assessment of pain management, assessing whether they ever have pain/discomfort that prevents sleep or wakes them from sleep, ever having to wait too long for pain medication, the extent to which nurses avoid pain, receiving information about medications, and being given enough medication to treat pain/discomfort. A count of areas for improvement is derived.	OUTCOME	INSTRUMENT	5	RESIDENT	QUESTIONNAIRE	5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Quality of Dying in Long-Term Care – Cognitively Intact (QOD-LTC-C)	23 items assessing the quality of dying in long-term care, appropriate to rate care for cognitively intact decedents. Each item refers to a potentially important aspect of dying, reflecting domains of sense of purpose, closure, control, social connection, and preparatory tasks. Sample items include "appeared to be at peace" and "participated as much as wanted in decisions about care." Items scored on five point Likert scale.	OUTCOME	INSTRUMENT	23	STAFF FAMILY	INTERVIEW	5
Quality of Dying in Long-Term Care (QOD-LTC)	11 items assessing the quality of dying in long-term care. Each item refers to a potentially important aspect of dying, reflecting domains of closure, personhood, and preparatory tasks. Sample items include "there was a nurse or aide with whom the resident felt comfortable" and "resident's dignity was maintained." Items are scored on a five point Likert scale.	OUTCOME	INSTRUMENT	11	STAFF FAMILY	INTERVIEW	5
Resident Satisfaction Survey	52 items generally scored on a 4 point Likert scale to assess responsive nursing home resident's satisfaction with nursing home activities, environment, food, interactions with staff, privacy/autonomy, security, and overall.	OUTCOME	INSTRUMENT	52	RESIDENT	INTERVIEW	5
Assisted Living Social Activity Scale (AL-SAS)	11 items reflecting participation in activities (yes/no) during the past week. Items reflect three factors of social activity participation: private activities (writing letters, reading, working on a hobby, talking on the telephone), group activities (arts and crafts, playing cards/bingo/games, attending religious services, going to the movies), and outings (to eat/drink, shopping/browsing, for walks). Scores can be examined as individual items or by subgroup.	OUTCOME	INSTRUMENT	11	STAFF	INTERVIEW	4
Dementia Care Mapping	26 observational recordings related to care and quality life for people with dementia. Standard use involves observation for 6 continuous hours of 5-8 people; every five minutes, two codes are recorded reflecting resident behavior and well/ill being; percents assigned to each category are determined. The measure assesses outcomes and processes of care; variations of the observational protocol have been suggested.	OUTCOME	INSTRUMENT	26	OTHER	OBSERVATION	4
Resident and Staff Observation Checklist: Quality of Life Indicators (RSOC-QOL)	Unobtrusive observer-rated checklist of the social environment; residents, staff, and visitors are observed for 15-30 second to determine resident activity, behavior, alertness, location, grouping, mobility, and restraints; quality of interaction also is noted. Summary data are obtained, and the result is provided on a 0-100 metric.	OUTCOME	INSTRUMENT	.	RESIDENT	OBSERVATION	4
Observational Measure of Engagement	4 observational ratings of engagement with a stimulus in terms of duration, attention, attitude, and activity, during up to 15 minutes, recorded using specially designed software. Scores are assigned on a 3 point Likert scale (not attentive to very attentive).	OUTCOME	INSTRUMENT	4	RESIDENT	OBSERVATION	3
Mortality rate		OUTCOME	MEASURE		CHART	ABSTRACT	2.5
Nursing Home Use per 'X' resident days	Number of nursing home days required / number of resident days (period TBD)	STRUCTURE	MEASURE		CHART	ABSTRACT	2.5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Menorah Park Engagement Scale – Brief Form	Observes engagement in a 10 minute period in terms of participated in target activity, did/commented on the activity (constructive engagement), listened/watched target activity (passive engagement), did or attended to things other than target activity (other/self-engagement), and slept/kept eyes closed/stared into space (nonengagement). Scoring relates to the highest level of engagement observed. ?	OUTCOME	INSTRUMENT	1	RESIDENT	OBSERVATION	2
Greater Cincinnati Chapter Well-Being Observation Tool	Observation of 19 indicators of 7 domains of well-being: interest, sustained attention, pleasure, negative affect, sadness, self-esteem, normalcy. Observers assign codes from 0 = never demonstrated to 4=always demonstrated, as observed s in a 10 minute period.	OUTCOME	INSTRUMENT	19	RESIDENT	OBSERVATION	1

1 Total scores range from 0-10; higher scores reflect higher quality.

Table 5a. Measures and Instruments, Resident/Patient Outcomes, by Score (n=69)

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Nursing Home Compare (MDS) Percent of Residents Who Self-Report Moderate to Severe Pain (long- and short-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38335&search=Assessment+of+pain+control+
Nursing Home Compare Percent of High Risk Residents With Pressure Ulcers (long- and short-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38336
Nursing Home Compare Percent of Low Risk Residents Who Lose Control of Their Bowels or Bladder (long-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38346
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Pneumococcal Vaccine (long- and short-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38341&search=Long+term+care+facility
Nursing Home Compare Percent of Residents Assessed and Appropriately Given the Seasonal Influenza Vaccine (long- and short-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38337
Nursing Home Compare Percent of Residents Experiencing One or More Falls With Major Injury (long-stay)	SYSTEM	NH ADC	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38334
Nursing Home Compare Percent of Residents Who Have Depressive Symptoms (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38351
Nursing Home Compare Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/hhs/content.aspx?id=1214#.VnHMaL-fKsI
Nursing Home Compare Percent of Residents Who Lost Too Much Weight (long-stay)	SYSTEM	NH	.	.	2	.	2	10	https://www.qualitymeasures.ahrq.gov/content.aspx?id=38350
Nursing Home Compare Percent of Residents Who Were Physically Restrained (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38348
Nursing Home Compare Percent of Residents Whose Need for Help With ADLs Has Increased (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38349
Nursing Home Compare Percent of Residents With a Urinary Tract Infection (long-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38345

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Nursing Home Compare Percent of Residents With Pressure Ulcers that are New or Worsened (short-stay)	SYSTEM	NH	.	.	2	.	2	10	http://www.qualitymeasures.ahrq.gov/content.aspx?id=38325
CORE-Q	PERSON	AL	2	2	2	1	2	9	http://www.ahcancal.org/ncal/quality/qualityinitiative/Pages/Customer-Satisfaction.aspx#coreq
Activities of Daily Living Unmet Need	PERSON	NH OTHER	2	2	2	2	0	8	http://gerontologist.oxfordjournals.org/content/41/1/82.full.pdf
Alzheimer's Disease Related Quality of Life (ADRQL)	PERSON	AL NH	2	2	2	2	0	8	http://www.hopkinsmedicine.org/psychiatry/specialty_areas/geriatric_psychiatry/research/adrql.html
Assisted Living Resident Satisfaction Scale (ALRSS)	PERSON	AL	2	2	2	2	0	8	Edelman et al. 2006. Measuring resident and family member determinants of satisfaction with assisted living. Gerontologist, 46(5), 599-608.
Ohio Nursing Home Family Satisfaction Survey (2012)	PERSON	NH	2	2	2	2	0	8	Straker et al. 2013. Implementation of the 2012 Ohio nursing home family satisfaction survey: research brief. Scripps Gerontology Center Publications.
Ohio Nursing Home Resident Satisfaction Survey	PERSON	NH	2	2	2	2	0	8	Straker et al. 2007. Developing and testing a satisfaction survey for nursing home residents: the Ohio experience. J Aging Soc Policy, 19(2), 83-105.
Quality of Life in Late-Stage Dementia (QUALID)	PERSON	AL NH	2	2	2	2	0	8	Weiner et al. 2000. The quality of life in late-stage dementia (QUALID) scale. J Am Med Dir Assoc, 1, 114–116.
Satisfaction With Care at the End of Life in Dementia (SWC-EOLD)	PERSON	AL NH	2	2	2	2	0	8	Volicer et al. 2001. Scales for evaluation of end of life care in dementia. Alz Dis Assoc Dis, 15(4), 194-200.
CAHPS Nursing Home Resident Survey: Discharged Resident Instrument	SYSTEM	NH	.	.	1	.	2	7.5	https://cahps.ahrq.gov/surveys-guidance/nh/resident/index.html https://cahps.ahrq.gov/surveys-guidance/nh/instructions/dischargedresident.html
Falls per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Falls With Death per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Falls With Major Injury per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Falls With Minor Injury per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Falls With Moderate Injury per 'X' resident days	SYSTEM	AL NH	.	.	1	.	2	7.5	
Measurement Tool for Clinical Practice Guideline Implementation: Measures for Falls and Fall Risk	SYSTEM	NH	.	.	1	.	2	7.5	http://www.cpgnews.org/FF/MeasureTool-Falls.pdf

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Mobility Tracking Tool (Advancing Excellence)	SYSTEM	NH	.	.	1	.	2	7.5	https://www.nhqualitycampaign.org/goalDetail.aspx?g=mob#tab2
Dementia Quality of Life Instrument (DQOL)	PERSON	AL NH ADC OTHER	1	2	2	2	0	7	Brod et al. 1999, Conceptualization and measurement of quality of life in dementia: the dementia quality of life instrument (DqoL). Gerontologist, 39(1), 25-35.
End of Life in Dementia – Comfort Assessment in Dying (EOLD-CAD)	PERSON	AL NH	2	2	2	1	0	7	Volicer et al. 2001. Scales for evaluation of end-of-life care in dementia. Alz Dis Assoc Dis, 15(4), 194-200.
Numeric Rating Scale for Pain	PERSON	NH HOSPICE HOSPITAL	2	2	2	1	0	7	Hawker et al. 2011. Measures of adult pain. Athrit Care Res, 63(S11), S240-S252.
Ohio Nursing Home Family Satisfaction Survey	PERSON	NH	1	2	2	2	0	7	Ejaz et al. 2003. Developing a satisfaction survey for families of Ohio's nursing home residents. Gerontologist, 43(4), 447-458.
Pleasant Events Schedule Nursing Home (PES-NH)	PERSON	NH	2	2	2	1	0	7	Meeks et al. 2009. The Pleasant Events Schedule—Nursing Home Version: A useful tool for behavioral interventions in long-term care. Aging Ment Health, 13(3), 445-455.
Purpose in Life Test (PIL)	PERSON	AL	2	2	2	1	0	7	Crumbaugh. 1968. Cross-validation of Purpose in Life Test based on Frankl's concepts. J Individ Psychol, 24, 74-81.
Satisfaction with Life Scale (SWLS)	PERSON	AL	2	2	2	1	0	7	Kobau et al. 2010. Well?being assessment: An evaluation of well?being scales for public health and population estimates of well?being among US adults. Appl Psychol: Health Well-being, 2(3), 272-297.
Short Pleasant Events Schedule for Alzheimer's Disease (PES-AD)	PERSON	DOCTOR	2	2	2	1	0	7	Logsdon et al. 1997. The Pleasant Events Schedule-AD: Psychometric properties and relationship to depression and cognition in Alzheimer's disease patients. Gerontologist, 37, 40-45.
Social Provisions Scale (SPA)	PERSON	NH	2	2	2	1	0	7	Cutrona et al. 1998. Predictors and correlates of continuing involvement with the baby's father among adolescent mothers. J Fam Psychol, 12, 369-387.
Subjective Happiness Scale	PERSON	AL	2	2	2	1	0	7	Lyubomirsky et al. 1999. A measure of subjective happiness: Preliminary reliability and construct validation. Soc Indic Res, 46, 137-155.
UCLA Loneliness Scale	PERSON	AL HOSPITAL	2	2	2	1	0	7	Russell. 1996. UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. J Person Assess, 66, 20-40.
Control, Autonomy, Self-realization, Pleasure-19 (CASP-19)	PERSON	OTHER	1	2	2	1	0	6	Sim et al. 2011. The CASP-19 as a measure of quality of life in old age: Evaluation of its use in a retirement community. Qual Life Res, 20(7), 997-1004.
End of Life in Dementia – Symptom Management	PERSON	AL NH	1	2	2	1	0	6	Volicer et al. 2001. Scales for evaluation of end-of-life care in dementia. Alz Dis Assoc Dis, 15(4), 194-200.
Hospice Quality of Life Index	PERSON	HOSPICE	2	2	1	1	0	6	McMillan et al. 1994. Measuring quality of life in hospice patients using a newly developed hospice quality of life scale. Qual Life Res, 3(6), 437-447.
Nursing Facility Family Satisfaction Questionnaire	PERSON	NH	2	0	2	2	0	6	Castle. (2004). Family satisfaction with nursing facility care. Int J Qual Health Care, 16(6), 1-7.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Pleasant Events Schedule	PERSON	NH	2	1	2	1	0	6	https://med.stanford.edu/oafc/coppes_files/coppes_measure_scoring.pdf
Quality of Life in Dementia	PERSON	AL NH	2	0	2	2	0	6	Albert et al. 1996. Quality of life in patients with Alzheimer's disease as reported by patient proxies. J Am Geriatr Soc, 44, 1342–1347.
Quality of Life Index-Nursing Home Version	PERSON	NH	2	2	1	1	0	6	Ferrans et al. 1992. Psychometric assessment of the Quality of Life Index. Res Nurs Health, 15, 29-38.
Quality of Life Scale (QOLS)	PERSON	AL	2	1	2	1	0	6	Burckhardt et al. 2003. The Quality of Life Scale (QOLS): reliability, validity, and utilization. Health Qual Life Outcomes, 23, 1:60.
Resident Satisfaction Index	PERSON	AL	2	1	2	1	0	6	Sikorska-Simmons. 2001. Development of an instrument to measure resident satisfaction with assisted living. J Appl Gerontol, 20(1), 1 57-173.
Rutgers Satisfaction Assessment Tool – Nursing Home Resident	PERSON	NH	2	0	2	2	0	6	http://www.ihhcpar.rutgers.edu/org_units/default.asp?v=2&o=1
Toolkit of Instruments to Measure End-of-Life Care—After Death Bereaved Family Member Interview	PERSON	AL NH HOSPITAL	2	1	1	2	0	6	Teno et al. 2001. Validation of toolkit after-death bereaved family member interview. J Pain Symptom Manage, 22, 752–758.
Palliative Care Outcome Scale	PERSON	HOSPICE HOSPITAL	1	2	1	1	0	5	Hearn et al. 1999. Development and validation of core outcome measure for palliative care: the palliative care outcome scale. Qual Health Care, 8, 219-227.
Percent of residents screened for future fall risk at least once a year	SYSTEM	NH	.	.	2	.	0	5	https://www.qualitymeasures.ahrq.gov/content.aspx?id=28112
Percent of residents with a history of falls screened for future fall risk at least once a year	SYSTEM	NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/hhs/content.aspx?id=1636#.VnH7X7-fKsI
Percent of residents with a history of falls who have a plan of care for fall documented	SYSTEM	NH	.	.	2	.	0	5	http://www.qualitymeasures.ahrq.gov/content.aspx?id=27972
Percent of residents with in-house acquired pressure ulcers	SYSTEM	AL NH	.	.	2	.	0	5	
Percent of residents with persistent indicators of dementia and no diagnosis (long and short stay)	SYSTEM	NH	.	.	2	.	0	5	http://www.qualityforum.org/Publications/2013/04/Neurology_Endorsement_Maintenance_-_Phase_II_Technical_Report.aspx
Perceptions of Pain Management	PERSON	NH	0	1	2	2	0	5	Teno et al. 2008. Development of a brief survey to measure nursing home residents' perceptions of pain management. J Pain Symptom Manag, 36(6), 572-583.
Quality of Dying in Long-Term Care – Cognitively Intact (QOD-LTC-C)	PERSON	AL	2	0	2	1	0	5	Munn et al. 2007. Measuring the quality of dying in long-term care. J Am Geriatr Soc, 55, 1371–1379.
Quality of Dying in Long-Term Care (QOD-LTC)	PERSON	AL	1	0	2	2	0	5	Munn et al. 2007. Measuring the quality of dying in long-term care. J Am Geriatr Soc, 55, 1371–1379.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Resident Satisfaction Survey	PERSON	NH	1	0	2	2	0	5	Kane. 2005. Quality of Life in Nursing Homes. Final Report. Centers for Medicare and Medicaid. Www.health.state.mn.us/nhreportcard/mn_survey_instrument.pdf
Assisted Living Social Activity Scale (AL-SAS)	PERSON	AL	1	0	2	1	0	4	Zimmerman et al. 2003. Social engagement and its relationship to service provision in residential care and assisted living. Soc Work Res, 27(1), 6-18.
Dementia Care Mapping	PERSON	AL NH	1	2	0	1	0	4	Sloane et al. 2007. Dementia care mapping as a research tool. Int J Geriatr Psychiatry, 22(6), 580-589.
Resident and Staff Observation Checklist: Quality of Life Indicators (RSOC-QOL)	PERSON	NH	2	1	0	1	0	4	Sloane et al. 2005. Evaluating the quality of life of long-term care residents with dementia. Gerontologist, 45(S1), 37-49.
Observational Measure of Engagement	PERSON	NH	1	1	0	1	0	3	Cohen-Mansfield et al. 2009. Engagement in persons with dementia: the concept and its measurement. Am J Geriatr Psychiatry, 17(4), 299-307.
Mortality rate	SYSTEM	NH HOSPITAL	.	.	1	.	0	2.5	https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/hospitalqualityinits/downloads/hospitalmortalityaboutami_hf.pdf
Nursing Home Use per 'X' resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
Menorah Park Engagement Scale – Brief Form	PERSON	AL NH ADC	0	0	0	2	0	2	Camp. 2010. Origins of Montessori programming for dementia. Nonpharmacol Ther Dement, 1(2), 163-174.
Greater Cincinnati Chapter Well-Being Observation Tool	PERSON	ADC	1	0	0	0	0	1	Kinney et al. 2005. Observed well-being among individuals with dementia: Memories in the Making, an art program, versus other structured activity. Am J Alzheimers Dis Other Demen, 20(4), 220-227.

1 Refers to whether data are collected at the system or person (i.e., individual) level.

2 Settings may not be comprehensive.

3 Not applicable for measures. Overall, if any one of test-retest, inter-rater, or internal consistency reliability ≥.80, scored as 2 (good) ; if .60-.79, scored as 1 (fair); if <.60 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.

4 Not applicable for measures. Overall, if any one of convergent, discriminant, predictive, or concurrent validity ≥.60, scored as 2 (good) ; if .40-.59, scored as 1 (fair); if <.40 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.

5 If it is not time intensive to train/administer and has a simple scoring strategy, scored as 2 (good); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor).

6 Not applicable for measures. Extent to which it informs and captures actionable change in structures or processes (i.e., does not exhibit floor or ceiling effects), scored as 2 (good);); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor). If no data exist, scored as 0, poor. Of note, the extent to which something is "actionable" may be subjective/differ for different organizations.

7 Benchmarks for long-term are external (i.e., does not refer to comparing to oneself).

8 Total scores range from 0-10; higher scores reflect higher quality.

9 Citations are not provided for measures that are described and do not require a reference.

Table 6. Measures and Instruments, Workforce, by Score (n=107)

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Consistent Assignment Tracking Tool (Advancing Excellence)	Tracks the number of caregivers each resident has for the month and calculates the percent of residents meeting a nursing homes target number.	STRUCTURE	MEASURE		RECORDS	ABSTRACT	10
Eaton Instrument for Measuring Turnover	Number of new employees (full or part time) divided by the number of employees in that category over a 12-month period.	OUTCOME	MEASURE		RECORDS	ABSTRACT	10
National Nursing Assistant Survey (Management/Supervision; Organizational Commitment/Job Satisfaction; Workplace Environment sections only)	Percent of respondents reporting perceptions of 10 items related to management/supervision; 29 related to organizational commitment/job satisfaction; 14 items in workplace environment.	PROCESS	MEASURE		STAFF	INTERVIEW	10
Percent of staff with flu vaccine		PROCESS	MEASURE		STAFF RECORDS	INTERVIEW QUESTIONNAIRE	10
Perception of Empowerment Instrument	15 items related to perceptions of autonomy (level of freedom and personal control), responsibility (psychological investment and commitment to job), and participation (influence in producing job outcomes and input on organizational goals and processes). Each is answered on a 5 point Likert scale, with higher scores indicating higher perception of empowerment.	PROCESS	INSTRUMENT	15	STAFF	QUESTIONNAIRE	10
Benjamin Rose Relationship with Supervisor Scale	11-item measure of nursing assistants' perceptions of relationships with their supervisors. Sample items include "listens carefully to my observations and opinions; respects by ability to observe and report clinical symptoms, ignores more input." Items are rated on a 3 point Likert scale in terms of frequency (hardly even/never, some of the time, most of the time). The total score ranges from 0-22; higher scores are favorable.	PROCESS	INSTRUMENT	11	STAFF	INTERVIEW	8
Charge Nurse Support Scale	15 items evaluating the supportive leadership behaviors (empathy and reliability toward staff) of charge nurses in long-term care settings. Sample items include "my charge nurse recognizes by ability to deliver quality care; tries to understand my point of view; keeps me informed of changes in the environment). Items are scored on a 5 point Likert scale, and summed (15-75); higher scores are more favorable.	PROCESS	INSTRUMENT	15	STAFF	QUESTIONNAIRE	8
Conditions for Work Effectiveness Questionnaire (CWEQ-II short form)	12 items measuring four empowerment dimensions: perceived access to opportunity (e.g., possibility for growth and movement), support (e.g., receiving feedback and guidance), information (e.g., having formal and informal knowledge), and resources (e.g., materials) in an individual's work setting. Additional items assess formal and informal power. Responses are provided on a 5 point Likert scale.	PROCESS	INSTRUMENT	12	STAFF	QUESTIONNAIRE	8
Core Nurse Resource Scale (CNRS)	Measures staff assessment of the relevance of core resources (physical, psychological and social) of the environment, including workplaces at risk of disengaged (low work engagement) nursing staff. Responses on 4 point scale of not relevant to very relevant.	PROCESS	INSTRUMENT	18	STAFF	QUESTIONNAIRE	8
Job Role Quality Questionnaire	36 items answered on a 4 point Likert scale to address concerns about and rewards associated with one's job. Concern subscales include: overload, dead-end job, hazard exposure, supervision, discrimination; reward subscales include helping others, decision authority, challenge, supervisor support, recognition, satisfaction with salary. Lower scores on concern subscales reflect better job features; higher scores on reward subscales reflect better job features.	PROCESS	INSTRUMENT	36	STAFF	INTERVIEW QUESTIONNAIRE	8

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
LEAP Leadership Behaviors and Organizational Climate Survey (leadership behaviors scale)	10 items answered on 5 point Likert scale to assess perceptions of leadership behaviors in terms of informing, consulting/delegating, planning/organizing, problem solving, role clarifying, monitoring operations, motivating, rewarding, mentoring, and managing conflict. Scores range from 0-50 and higher scores reflect better perceptions.	PROCESS	INSTRUMENT	10	STAFF	QUESTIONNAIRE	8
Nursing Home Survey on Patient Safety (Modified for Assisted Living)	38 items based on the nursing home patient safety survey, which asks about resident safety issues such as related to staff interactions, communication, supervision, and care provision. Summary score range from 0-100 across 11 domains, with higher scores more favorable; the summary score is the percent of positive responses.	PROCESS	INSTRUMENT	38	STAFF	QUESTIONNAIRE	8
Nursing Home Survey on Resident Safety Culture (AHRQ)	44 items scored on a 5 point Likert scale assessing the safety climate in a nursing home, with questions addressing teamwork, staffing adequacy, compliance with procedures, training and skills, nonpunitive response to mistakes, handoffs, feedback and communication about incidents, communication openness, supervisor expectations and actions promoting resident safety, overall perceptions of resident safety, management support for resident safety, and organizational learning. Scores are based on the average percent positive for each item overall or within each dimension.	PROCESS	INSTRUMENT	44	STAFF	QUESTIONNAIRE	8
Team Development Measure	31 items measuring team development in clinical settings, including the domains of cohesion, communication, roles and goals, and team primacy. Items are scored on a 3 point Likert scale, ranging from strongly disagree to strongly agree.	PROCESS	INSTRUMENT	31	STAFF	QUESTIONNAIRE	8
LPN + NA Direct Care Time per resident day		STRUCTURE	MEASURE		RECORDS	ABSTRACT	7.5
LPN Hours per resident day		STRUCTURE	MEASURE		RECORDS	ABSTRACT	7.5
NA Hours per bed		STRUCTURE	MEASURE		RECORDS	QUESTIONNAIRE	7.5
NA Hours per resident day		STRUCTURE	MEASURE		RECORDS	QUESTIONNAIRE	7.5
Direct Care Worker Job Satisfaction Scale	16 items assessing satisfaction with various aspects of a direct care worker's job. Sample items relate to recognition, job security, fringe benefits, supplies used, how complaints are handled, and opportunities for promotion. Items are scored on a 4 point Likert scale, with higher scores indicating higher job satisfaction.	OUTCOME	INSTRUMENT	16	STAFF	INTERVIEW	7
Ethics Environment Questionnaire (EEQ)	20 items assessing opinions of health-care providers about ethics in their clinical practice organizations. Items assess 5 areas: relationships of nurses with peers, patients, managers, hospital, and physicians. Items use a 5 point Likert scale and are summed and averaged to obtain an overall score.	PROCESS	INSTRUMENT	20	STAFF	QUESTIONNAIRE	7
Grief Support in Healthcare Scale	15 items that assess grief support for healthcare workers, assessing "recognition of the relationship," acknowledgement of the loss," and "inclusion of the griever." Responses given on 5 point Likert scale of 'strongly disagree' to 'strongly agree'. Responses are summed and higher scores reflect better grief-related support.	PROCESS	INSTRUMENT	15	STAFF	QUESTIONNAIRE	7

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Job Characteristics Scales of the Job Diagnostic Survey	15 items answered on a 7 point Likert scale to measure perceived job characteristics. Subscales address skill variety, task significance, autonomy, task identity, and feedback and scores correlate with absenteeism and job satisfaction.	PROCESS	INSTRUMENT	15	STAFF	QUESTIONNAIRE	7
Job Satisfaction Subscale (Michigan Organizational Assessment Questionnaire, MOAQ)	3 items measuring job satisfaction: "all in all I am satisfied with my job, in general, I don't like my job, and in general, I like working here." Responses are scored on a Likert scale that can be 5, 8, or 7 points; scores are averaged after reverse scoring the negative item.	OUTCOME	INSTRUMENT	3	STAFF	QUESTIONNAIRE	7
LEAP Leadership Behaviors and Organizational Climate Survey (organizational climate scale)	10 items answered on 5 point Likert scale to assess perceptions of organizational climate in terms of communication flow, human resources, motivational conditions, and decision-making practices. Scores range from 4-20 and higher scores reflect better perceptions of organizational climate.	PROCESS	INSTRUMENT	4	STAFF	QUESTIONNAIRE	7
Nurse-Nursing Assistant Caregiver Reciprocity Scale	16 items reflecting reciprocal ethical caregiving (e.g., team members respect each other), love and affection (e.g., I tell my patients I love them), and intrinsic rewards (e.g., I am willing to do all I can for my patients). Higher scores reflect higher perceived co-worker ethical caring.	PROCESS	INSTRUMENT	16	STAFF	QUESTIONNAIRE	7
Nursing Assistant Barriers Scale (NABS)	30 items assessing nurse aides (NAs) perceptions of barriers to effective job performance, addressing 6 subscales: Teamwork, Exclusion, Respect, Workload, Work Stress, and New NAs. Sample items include calling in at the last minute, handling residents with dementia, and rudeness and disrespect. A Likert scale is used and mean scores are derived within subscales.	OUTCOME	INSTRUMENT	30	STAFF	QUESTIONNAIRE	7
Nursing Stress Scale	34 items that describe situations identified as causing stress for nurses in the performance of their duties. It provides a total stress score as well as scores on subscales that measure the frequency of stress experienced by nurses in the hospital environment: performance of practical activities, professional communication, time management, environment, professional education, and theoretical activity.	OUTCOME	INSTRUMENT	34	STAFF	QUESTIONNAIRE	7
Psychological Empowerment Scale (PEI)	12 multidimensional items assessing psychological empowerment in the workplace. Items asses meaning (e.g., the work is very important), competence (e.g., I have mastered the skills), self-determination (e.g., I have significant autonomy) and impact (e.g., my impact on what happens is large). Items are scored on a 7 point Likert scale, and higher scores indicate higher perceived empowerment.	OUTCOME	INSTRUMENT	12	STAFF	QUESTIONNAIRE	7
Quality of Employment Survey (quantitative workload scale)	4 items answered on 5 point Likert scale to assess perceptions of staff workload. Higher scores indicate higher workload and have been associated with lower satisfaction.	PROCESS	INSTRUMENT	4	STAFF	QUESTIONNAIRE	7
Shortell Organization and Management Survey, Nursing Home Adaptation – Communication and Leadership Subscales	19 items rated on 5 point Likert scale that address 5 subscales of communication and leadership. Subscales include connectedness, timeliness and understanding, organizational harmony, clinical leadership, and perceived effectiveness. Higher scores indicate better perceived communication (or leadership).	PROCESS	INSTRUMENT	69	STAFF	QUESTIONNAIRE	7

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Supportive Supervisory Scale	15 items about the degree to which supervisor demonstrates behaviors related to respecting uniqueness and being reliable. Sample items include "my charge nurse tries to meet my needs; my charge nurse encourages me in even in difficult situations; I can rely on my charge nurse to be open to any remarks I may make." Responses are provided on a 5 point Likert scale of frequency and totaled; higher scores indicate more supervisory support.	PROCESS	INSTRUMENT	15	STAFF	INTERVIEW QUESTIONNAIRE	7
Utrecht Work Engagement Scale (UWES-9)	9 items measuring work engagement, conceived to be a positive work-related state of fulfillment characterized by vigor, dedication, and absorption. Items are scored on a 0-6 point Likert scale, from almost never/a few times a year or less to 6 always/every day. The score is based on the sum of all items, and an average score for each subscale can be derived. The higher the score, the more the respondent experiences feelings of vigor, dedication and/or absorption.	OUTCOME	INSTRUMENT	9	STAFF	QUESTIONNAIRE	7
Benjamin Rose Nurse Assistant Job Satisfaction Scale	18 items measuring satisfaction in five subscales: communication and recognition, amount of time to do work, available resources, teamwork, management practices. Sample items relate to the working conditions, the teamwork between staff, the recognition received for work, and the amount of time available to do work. Items are scored on a 4 point Likert scale, ranging from very satisfied to very dissatisfied; higher scores are favorable.	OUTCOME	INSTRUMENT	18	STAFF	INTERVIEW	6
Job Attitude Scale	17 items assessing attitudes regarding pay, interaction/organizational factors, task requirements, job status, and autonomy. Sample items include "I am supervised more closely than necessary," "I am sometimes frustrated because my tasks seem programmed," and "I have sufficient time for direct resident care." Items are scored on a 5 point Likert scale, with higher scores indicating more satisfaction.	PROCESS	INSTRUMENT	17	STAFF	QUESTIONNAIRE	6
Job Descriptive Index	54 questions that capture 6 domains describing the nature of job (attitude toward job; 11 items); opportunities and promotions (13 items); supervising (6 items); co-workers (10 items); benefits and salary (7 items); conditions of workplace (7 items). Scoring uses a 4 point Likert scale ranging from completely disagree to completely agree.	PROCESS	INSTRUMENT	54	STAFF	QUESTIONNAIRE	6
Job Satisfaction	6 job satisfaction items assessing workplace morale, challenging work, benefits, salary or wages, learning new skills, and overall satisfaction. Items are measured on a 4 point Likert scale from strongly agree to strongly disagree.	OUTCOME	INSTRUMENT	6	STAFF	QUESTIONNAIRE	6
Maslach Burnout Inventory	22 items about attitudes and personal feelings that assess three aspects of burnout: emotional exhaustion (being emotionally overextended and exhausted by work), depersonalization (unfeeling and impersonal response toward the recipients of service), and lack of personal accomplishment (incompetence and lack of achievement). Items are rated on a 7 point Likert scale ranging from never to every day.	OUTCOME	INSTRUMENT	22	STAFF	QUESTIONNAIRE	6
Nursing Home Administrator Job Satisfaction Scale (NHA-JQ)	27 items assessing job satisfaction of nursing home administrators in 7 domains: coworkers, work demands, work content, workload, work skills, rewards, and intent to leave. Sample items rate cooperation among staff, closeness to residents and families, and thinking about quitting. Items other than intent are scored 1-10, and intent to leave is scored 1-5.	OUTCOME	INSTRUMENT	27	STAFF	QUESTIONNAIRE	6

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Nursing Home Certified Nurse Assistant Job Satisfaction Questionnaire (NH-CNA-JSQ)	19 items assessing nursing home nursing assistant (NA) job satisfaction in 7 areas: coworkers, work demands, work content, workload, training, rewards, and quality of care. Sample items include rating cooperation among staff; closeness to residents and families, work schedule, work skills, and care given to residents. Items are scored on a 10 point Likert scale ranging from very poor to excellent.	OUTCOME	INSTRUMENT	19	STAFF	QUESTIONNAIRE	6
Organizational Culture Survey	36 items assessing six subscales of staff perceptions of teamwork, morale, information flow, involvement, supervision, and meetings. Sample items include "the individuals I work with function as a team, this organization respects it workers, and I get the information I need to do my job well." Responses are scored on a 5 point Likert scale, and summed across items.	PROCESS	INSTRUMENT	36	STAFF	QUESTIONNAIRE	6
Role Overload Scale (Michigan Organizational Assessment Questionnaire, MOAQ)	3 items answered on 7 point Likert scale that assess perceptions of workload. Scores range from 3-21 and higher scores reflect higher workload and are associated with lower satisfaction.	PROCESS	INSTRUMENT	3	STAFF	QUESTIONNAIRE	6
Workplace Violence Tool	4 items regarding having been spit on, bitten, hit or pushed. Each item is scored yes/no, and higher scores indicate more violence.	PROCESS	INSTRUMENT	4	STAFF	QUESTIONNAIRE	6
Annual Short Turnover Survey for North Carolina Department of Health and Human Services' Office of Long Term Care	The sum of full time and part time voluntary and involuntary terminations / number needed to be completely staffed by full time and part time staff; can create separate scores for voluntary and involuntary.	OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Generic Job Satisfaction Scale	10 item scale of job satisfaction that can be used in a range of occupations. Items address recognition, feeling close to others at work and good about working, feeling secure, believing management cares and work is good for health, that wages are good, that talents and skills are used at work, that relations with the supervisor are good, and feeling good about the job. Scoring is on a 5 point Likert scale, with higher scores reflecting more satisfaction.	OUTCOME	INSTRUMENT	10	STAFF	QUESTIONNAIRE	5
Grau Job Satisfaction Scale	17 items assessing intrinsic job satisfaction and satisfaction with job benefits; sample items include the extent to which the following statements are true: can see results of work, sense of accomplishment, get to do a variety of things, have enough authority (intrinsic) and fringe benefits, security, pay, and chances for promotion are good (benefits). Items rated on a 4 point Likert scale and summed.	OUTCOME	INSTRUMENT	17	STAFF	QUESTIONNAIRE	5
Intent to Turnover Measure (Michigan Organizational Assessment Questionnaire, MOAQ)	3 items assessing intent to turnover: (a) I will probably look for a new job in the next year; (2) I often think about quitting; and (3) How likely is it that you could find a job with another employer with about the same pay and benefits you now have? Each item is scored on a 3 point Likert scale and ratings are averaged to create the final score.	OUTCOME	INSTRUMENT	3	STAFF	QUESTIONNAIRE	5
LPN Cost per resident		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
LPN FTE (Full Time Equivalent)		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
LPN Hours per bed		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Minnesota Satisfaction Questionnaire	20 items regarding the degree to which vocational needs and values are satisfied on a job; it assesses intrinsic and extrinsic job satisfaction (two subscales) and also general job satisfaction. Sample items relate to achievement, compensation, coworkers, creativity, and recognition. The items are scored on a 5 point Likert scale ranging from very satisfied to very dissatisfied.	OUTCOME	INSTRUMENT	20	STAFF	QUESTIONNAIRE	5
NA FTE (Full Time Equivalent)		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
NA Per Nursing Staff (RN+LPN)		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Nursing Home Compare Five Star Quality Rating System of Staffing Levels	Case-mix adjusted measures of (1) RN hours per resident day, and (2) total staffing hours (RN+ LPN + NA) hours per resident day. Adjustment based on distribution of MDS 3.0 assessments by RUG-III group.	STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Organizational Relationships Scale	18 items measuring perceptions staff nurses have of informal power in the work environment; it measures peer networking, sponsor support, political alliances, and subordinate relationships. Items are scored on a 5 point Likert scale.	PROCESS	INSTRUMENT	18	STAFF	INTERVIEW QUESTIONNAIRE	5
Organizational Social Context Scale	105 items assessing organizational culture in relation to the expectations that govern the way things are done in an organization; they assess 3 domains of organizational culture (rigidity, proficiency, and resistance) and three dimensions of organizational climate (stress, engagement, and functionality). Sample items reflect the amount to which coworkers show signs of stress; the extent to which the agency rewards experience, dedication, and hard work; and how well a person is kept informed about things that are necessary to know. Each item is scored on a 5 point Likert scale, from not at all to a very great amount.	OUTCOME	INSTRUMENT	105	STAFF	QUESTIONNAIRE	5
Percent of licensed pharmacists with geriatric certification		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of physical therapists with geriatric certification		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of physicians with geriatric certification		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of RNs + LPNs with geriatric certification		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of social workers with a major in aging or geriatric social work		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Percent of staff supplied by agency		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Price and Mueller Instrument for Measuring Turnover	Five point scale measuring turnover as a "quit rate" computed as the number of employees who leave voluntarily during a period divided by the number employed as of the beginning of that period. It is recommended to express the quit rate as percentages.	OUTCOME	MEASURE		RECORDS	QUESTIONNAIRE	5
Remsburg, Armacost, and Bennett Stability Rate	Turnover rate calculated as the total number of full-time NAs who terminated employment during the fiscal year (regardless of length of time employed) divided by the sum of the number of full-time NAs hired who reported to work at least 1 day during the year plus the number of NAs who continued employment from the previous fiscal year. This ratio was expressed as a percentage.	OUTCOME	MEASURE		STAFF	QUESTIONNAIRE	5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
RNs on unit		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
RNs/LPNs		STRUCTURE	MEASURE		RECORDS	ABSTRACT	5
Satisfaction with Supervision Index	17 items reflecting satisfaction with adequacy of communication, feedback, recognition, and support. Sample items include listening carefully to observations and opinions, being unavailable, ignoring input, and understanding loss when a resident dies. Each item is scored on a 3 point Likert scale ranging from hardly ever to most of the time, with higher scores indicating greater satisfaction.	OUTCOME	INSTRUMENT	17	STAFF	QUESTIONNAIRE	5
Turnover, Administrator		OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Turnover, DON		OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Turnover, LPN (six month)		OUTCOME	MEASURE		RECORDS		5
Turnover, LPN (Voluntary)		OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Turnover, NA (six month)		OUTCOME	MEASURE		RECORDS		5
Turnover, NA (voluntary)		OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Turnover, RN (six month)		OUTCOME	MEASURE		RECORDS		5
Turnover, RN (voluntary)		OUTCOME	MEASURE		RECORDS	ABSTRACT	5
Work Stress Inventory	45 stressors assessing six stress domains: related to events, resident care, relations with coworkers, relations with supervisors, workload and scheduling, and physical design. Sample items include ''how often have you had to do tasks for which you have little or no training, how often have you not gotten help from your coworkers when you needed it, and would you describe your workplace as not having a place to get away from residents? Responses use a 5 point Likert scale.	OUTCOME	INSTRUMENT	45	STAFF	QUESTIONNAIRE	5
Yeatts and Cready Dimensions of Empowerment Measure	26 items measuring five empowerment dimensions: ability to make workplace decisions, ability to modify the work, perception that management listens to nursing assistants (NAs), perception that management consults NAs, and global empowerment. Sample items include "I am allowed to make my own decisions" and "NAs are provided reasons when their suggestions are not use." Scores are summed within subscales, and higher scores indicate higher perceptions of empowerment.	PROCESS	INSTRUMENT	26	STAFF	QUESTIONNAIRE	5
Job Satisfaction, Overall	1 item reflecting job satisfaction: "Overall, how satisfied are you with your job?" The item is scored on a 5 point Likert scale from 'very satisfied' to 'very dissatisfied.'	OUTCOME	INSTRUMENT	1	STAFF	QUESTIONNAIRE	4

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
Nursing Home Nurse Aide Job Satisfaction Questionnaire	22 items assessing seven areas: coworkers (relations with other workers); work demands (resources and demands of the job); work content (complexity and challenges of the work); work load (time pressures); training (preparation for the position); rewards (benefits of the job); and quality of care (how well nurse aides perceive residents are cared for). In addition, two global job satisfaction questions are included. Responses are provided on a 10 point Likert scale.	OUTCOME	INSTRUMENT	22	STAFF	QUESTIONNAIRE	4
Organizational Commitment	6 items reflecting organizational identification and organizational involvement, both 3-item scales. Organizational identification included the items: 'I'm proud to tell people where I work'; 'I'm really part of the nursing facility'; and 'I would discourage a close friend from joining the staff'. Organizational involvement included the items: 'I am not willing to put myself out just to help the nursing facility'; 'In my work, I like to feel I am making some effort, not just for myself but for the facility as well'; and 'If I know that my own work had made the nursing facility better, I would be pleased'. Items are scored on a 5 point Likert scale, and summed.	OUTCOME	INSTRUMENT	6	STAFF	QUESTIONNAIRE	4
Work Environment	19 items assessing characteristics of the work environment including relationship with supervisor (10 items), organizational climate (5 items), time pressure (2 items), and feelings of being valued (2 items). Items are scored on either a 3 or 4 point Likert scale, and mean scores are derived for each subscale.	PROCESS	INSTRUMENT	19	STAFF	QUESTIONNAIRE	4
Home Health or One-on-One Care per 'X' resident days		STRUCTURE	MEASURE		CHART	ABSTRACT	2.5
LPN FTE (Full Time Equivalent) per 100 beds		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
LPN FTE (Full Time Equivalent) per 100 resident days		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
LPN FTE (Full Time Equivalent) per 100 residents		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
Medical Specialist Visits per 'X' resident days		STRUCTURE	MEASURE		CHART	ABSTRACT	2.5
NA FTE (Full Time Equivalent) per 100 beds		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
NA FTE (Full Time Equivalent) per 100 resident days		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
NA FTE (Full Time Equivalent) per 100 residents		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
Pattern Score, LPN	Total number of direct-patient-care LPN/LVN nursing hours during study month divided by total midnight patient census during study month.	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
Pattern Score, RN	Total number of direct patient care RN nursing hours during study month divided by total midnight patient census during study month.	STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
Resident-Specific Minutes of Care per day		STRUCTURE	MEASURE		STAFF	ABSTRACT	2.5

Name	Description	Construct	Measure or Instrument	Number of Items	Source of Information	Process to Obtain Information	Total Score[1]
RN + LPN + NA Hours per resident		STRUCTURE	MEASURE		RECORDS	OTHER	2.5
RN + LPN + NA Hours per resident day		STRUCTURE	MEASURE		RECORDS	OTHER	2.5
RN Cost per resident		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN Daily Hours per bed		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN FTE (Full Time Equivalent) per 100 resident beds		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN FTE (Full Time Equivalent) per 100 resident days		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN FTE (Full-Time Equivalent per resident		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RN Hours per resident day		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RNs + LPNs per 100 beds		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RNs + LPNs per 30 beds		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RNs per 100 resident beds		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
RNs per 100 residents		STRUCTURE	MEASURE		RECORDS	ABSTRACT	2.5
Turnover, LPN (Involuntary)		OUTCOME	MEASURE		RECORDS	ABSTRACT	2.5
Turnover, NA (Involuntary)		OUTCOME	MEASURE		RECORDS	ABSTRACT	2.5
Turnover, RN (Involuntary)		OUTCOME	MEASURE		RECORDS	ABSTRACT	2.5
Propensity to Leave	1 item reflecting propensity to leave job: "Do you plan to be working in the nursing home 5 years from now?" The item is scored yes, no, and uncertain.	OUTCOME	INSTRUMENT	1	STAFF	QUESTIONNAIRE	2

1 Total scores range from 0-10; higher scores reflect higher quality.

Table 6a. Measures and Instruments, Workforce, by Score (n=107)

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Consistent Assignment Tracking Tool (Advancing Excellence)	SYSTEM	NH	.	.	2	.	2	10	https://www.nhqualitycampaign.org/goalDetail.aspx?g=ca#tab2
Eaton Instrument for Measuring Turnover	SYSTEM	NH	.	.	2	.	2	10	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#worker-super
National Nursing Assistant Survey (Management/Supervision; Organizational Commitment/Job Satisfaction; Workplace Environment sections only)	PERSON	NH	.	.	2	.	2	10	http://www.cdc.gov/nchs/data/nnhsd/2004NNASQuestionnaire.pdf
Percent of staff with flu vaccine	SYSTEM	NH	.	.	2	.	2	10	Daugherty et al. 2015. Influenza vaccination rates and beliefs about vaccination among nursing home employees. Am J Infect Control, 43(2), 100-106.
Perception of Empowerment Instrument	PERSON	NH	2	2	2	2	2	10	https://www.nhqualitycampaign.org/files/PEI_Instrument.pdf
Benjamin Rose Relationship with Supervisor Scale	PERSON	NH	2	2	2	2	0	8	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#worker-super
Charge Nurse Support Scale	PERSON	NH	2	2	2	2	0	8	McGilton. 2003. Development and psychometric evaluation of supportive leadership scales. Can J Nurs Res, 35(4), 72-86.
Conditions for Work Effectiveness Questionnaire (CWEQ-II short form)	PERSON	HOSPITAL	2	2	2	2	0	8	http://publish.uwo.ca/~hkl/tools/cweq/index.html
Core Nurse Resource Scale (CNRS)	PERSON	NH	2	2	2	2	0	8	Simpson. 2010. Development and psychometric evaluation of the Core Nurse Resource Scale. J Nurs Manag, 18(8), 1048-1059.
Job Role Quality Questionnaire	PERSON	NH	2	2	2	2	0	8	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
LEAP Leadership Behaviors and Organizational Climate Survey (leadership behaviors scale)	PERSON	NH	2	2	2	2	0	8	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Nursing Home Survey on Patient Safety (Modified for Assisted Living)	SYSTEM	AL NH HOSPITAL	2	2	2	2	0	8	Castle et al. 2012. Measuring administrators' and direct care workers' perceptions of the safety culture in assisted living facilities. Jt Comm J Qual Patient Saf, 38(8), 375-382.
Nursing Home Survey on Resident Safety Culture (AHRQ)	SYSTEM	NH	2	0	2	2	2	8	Nursing Home Survey on Patient Safety Culture. November 2015. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/nursing-home/index.html

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Team Development Measure	PERSON	NH	2	2	2	2	0	8	Stock. 2013. Measuring team development in clinical care settings. Fam Med, 45(10),691-700.
LPN + NA Direct Care Time per resident day	SYSTEM	AL NH HOSPITAL	.	.	1	.	2	7.5	
LPN Hours per resident day	SYSTEM	AL NH HOSPITAL	.	.	1	.	2	7.5	
NA Hours per bed	SYSTEM	NH	.	.	1	.	2	7.5	Temple et al. 2009. Exploring correlates of turnover among nursing assistants in the National Nursing Home Survey. Health Care Manage Rev, 34(2), 182-190.
NA Hours per resident day	SYSTEM	NH	.	.	1	.	2	7.5	Temple et al. 2009. Exploring correlates of turnover among nursing assistants in the National Nursing Home Survey. Health Care Manage Rev, 34(2), 182-190.
Direct Care Worker Job Satisfaction Scale	PERSON	NH	2	1	2	2	0	7	Farida et al. 2008. The impact of stress and support on direct care workers' job satisfaction. Gerontologist, 48(S1), 60-70.
Ethics Environment Questionnaire (EEQ)	PERSON	HOSPITAL	2	2	2	1	0	7	McDaniel. 1997. Development and psychometric properties of the Ethics Environment Questionnaire. Med Care, 35(9, 901-914.
Grief Support in Healthcare Scale	PERSON	NH	2	2	2	1	0	7	Anderson et al. 2010. The Grief Support in Healthcare Scale: Development and testing. Nursing Research, 59(6), 372-379.
Job Characteristics Scales of the Job Diagnostic Survey	PERSON	NH	1	2	2	2	0	7	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Job Satisfaction Subscale (Michigan Organizational Assessment Questionnaire, MOAQ)	PERSON	NH	2	2	2	1	0	7	Bowling et al. 2008. A meta-analytic examination of the construct validity of the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale. J Vocat Behav, 73, 63-77.
LEAP Leadership Behaviors and Organizational Climate Survey (organizational climate scale)	PERSON	NH	1	2	2	2	0	7	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Nurse-Nursing Assistant Caregiver Reciprocity Scale	PERSON	NH	2	2	2	1	0	7	Yen-Patton et al. 2013. Development and psychometric validation of the nurse-nursing assistant-caregiver reciprocity scale: measuring reciprocal ethical caring. IJHC, 17(1), 7.
Nursing Assistant Barriers Scale (NABS)	PERSON	NH	2	1	2	2	0	7	Parmelee et al. 2009. Perceived barriers to effective job performance among nursing assistants in long-term care. J Am Med Dir Assoc, 10(8), 559-567.
Nursing Stress Scale	PERSON	HOSPITAL	2	2	2	1	0	7	Gray-Toft et al. 1981. Stress among hospital nursing staff: its causes and effects. Soc Sci Med A, 15(5), 639-647.
Psychological Empowerment Scale (PEI)	PERSON	NH	2	2	2	1	0	7	Spreitzer. 1995. Psychological empowerment in the workplace: dimensions, measurement, and validation. Acad Manage J, 38(5), 1442-1465.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Quality of Employment Survey (quantitative workload scale)	PERSON	NH	1	2	2	2	0	7	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Shortell Organization and Management Survey, Nursing Home Adaptation - Communication and Leadership Subscales	PERSON	NH HOSPITAL	2	2	1	2	0	7	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Supportive Supervisory Scale	PERSON	NH	2	1	2	2	0	7	McGilton. 2010. Development and psychometric testing of the Supportive Supervisory Scale. J Nurs Scholarship, 42(2),223-232.
Utrecht Work Engagement Scale (UWES-9)	PERSON	NH	2	2	2	1	0	7	Simpson. 2010. Development and psychometric evaluation of the Core Nurse Resource Scale. J Nurs Manag, 18(8), 1048-1059.
Benjamin Rose Nurse Assistant Job Satisfaction Scale	PERSON	NH	2	0	2	2	0	6	https://www.nhqualitycampaign.org/files/BenjaminRose_NurseAssistant_JobSatisfactionScale.pdf
Job Attitude Scale	PERSON	AL NH	2	1	2	1	0	6	Flannery et al. 2012. Reliability and validity assessment of the Job Attitude Scale. Geriatr Nurs, 33(6), 465-472.
Job Descriptive Index	PERSON	NH	2	1	2	1	0	6	Shahnazi et al. 2014. Job satisfaction survey among health centers staff. J Edu Health Promot, 3:35.
Job Satisfaction	PERSON	NH	2	0	2	2	0	6	Probst et al. 2010. The relationship between workplace environment and job satisfaction among nursing assistants: findings from a national survey. J Am Med Dir Assoc, 11(4), 246-252.
Maslach Burnout Inventory	PERSON	AL NH HOSPICE HOSPITAL	2	1	2	1	0	6	Maslach. 1982. Burnout: The cost of caring. Englewood Cliffs: PrenticeHall.
Nursing Home Administrator Job Satisfaction Scale (NHA-JQ)	PERSON	NH	1	1	2	2	0	6	Castle et al. 2007. Job satisfaction of nursing home administrators and turnover. Med Care Res Rev, 64(2), 191-211.
Nursing Home Certified Nurse Assistant Job Satisfaction Questionnaire (NH-CNA-JSQ)	PERSON	NH	1	2	2	1	0	6	Castle, N.G. (2010). An instrument to measure job satisfaction of certified nurse assistants. Appl Nurs Res, 23, 214-220.
Organizational Culture Survey	PERSON	NH	2	2	1	1	0	6	Sikorska-Simmons. 2006. Organizational culture and work-related attitudes among staff in assisted living. J Gerontol Nurs, 32(2), 19-27.
Role Overload Scale (Michigan Organizational Assessment Questionnaire, MOAQ)	PERSON	NH	1	2	1	2	0	6	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes#turnover
Workplace Violence Tool	PERSON	NH	2	0	2	2	0	6	Duncan et al. 2000. Violence against nurses. Alta RN, 56(2), 13-14.
Annual Short Turnover Survey for North Carolina Department of Health and Human Services' Office of Long Term Care	SYSTEM	NH	.	.	2	.	0	5	https://aspe.hhs.gov/basic-report/measuring-long-term-care-work-guide-selected-instruments-examine-direct-care-worker-experiences-and-outcomes

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Generic Job Satisfaction Scale	PERSON	NH OTHER	1	1	2	1	0	5	http://anthro.vancouver.wsu.edu/media/Course_files/anth-260-edward-h-hagen/job_staisfaction_1997-libre.pdf.
Grau Job Satisfaction Scale	PERSON	AL NH	2	0	2	1	0	5	Grau et al. 1991. Institutional loyalty and job satisfaction among nurse aides in nursing homes. J Aging Health, 3(1), 47-65.
Intent to Turnover Measure (Michigan Organizational Assessment Questionnaire, MOAQ)	PERSON	NH	2	0	2	1	0	5	https://aspe.hhs.gov/sites/default/files/pdf/122171/dcwguideA_0.pdf
LPN Cost per resident	SYSTEM	AL NH	.	.	2	.	0	5	
LPN FTE (Full Time Equivalent)	SYSTEM	HOSPITAL	.	.	2	.	0	5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5.
LPN Hours per bed	SYSTEM	NH	.	.	2	.	0	5	
Minnesota Satisfaction Questionnaire	PERSON	NH	2	1	1	1	0	5	http://vpr.psych.umn.edu/msq.html
NA FTE (Full Time Equivalent)	SYSTEM	HOSPITAL	.	.	2	.	0	5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.
NA Per Nursing Staff (RN+LPN)	SYSTEM	AL NH	.	.	2	.	0	5	
Nursing Home Compare Five Star Quality Rating System of Staffing Levels	SYSTEM	NH	.	.	0	.	2	5	https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf
Organizational Relationships Scale	PERSON	AL NH	2	0	2	1	0	5	https://cardinalscholar.bsu.edu/bitstream/handle/123456789/194825/OyerM_2011-2_BODY.pdf?sequence=1.
Organizational Social Context Scale	PERSON	NH	2	0	2	1	0	5	Cassie et al. 2012. Organizational and individual conditions associated with depressive symptoms among nursing home residents over time. Gerontologist, 52(6), 812-821.
Percent of licensed pharmacists with geriatric certification	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of physical therapists with geriatric certification	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of physicians with geriatric certification	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of RNs + LPNs with geriatric certification	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Percent of social workers with a major in aging or geriatric social work	SYSTEM	AL NH HOSPITAL DOCTOR	.	.	2	.	0	5	Kovner et al. 2002. Who care for older adults? Workforce implications of an aging society. Health Aff (Millwood), 21(5), 78-89.
Percent of staff supplied by agency	SYSTEM	HOSPITAL	.	.	2	.	0	5	Lake et al. 2010. Patient falls: association ith hospital magnet status and nursing unit staffing. Res Nurs Health, 33, 413-425.
Price and Mueller Instrument for Measuring Turnover	SYSTEM	HOSPITAL	.	.	2	.	0	5	Davidson et al. 1997. The effects of health care reforms on jobs satisfaction and voluntary turnover among hospital-based nurses. Med Care, 35(6), 634-645.
Remsburg, Armacost, and Bennett Stability Rate	SYSTEM	NH	.	.	2	.	0	5	Remsburg et al. 1999. Improving nursing assistant turnover and stability rates in a long-term care facility. Geriatr Nurs, 20(4), 203-208.
RNs on unit	SYSTEM	NH	.	.	2	.	0	5	
RNs/LPNs	SYSTEM	NH	.	.	2	.	0	5	
Satisfaction with Supervision Index	PERSON	AL NH	2	0	2	1	0	5	Noelker et al. 2009. Factors affecting frontline workers' satisfaction with supervision. J Aging Health, 21(1), 85-101.
Turnover, Administrator	SYSTEM	AL NH	.	.	2	.	0	5	http://www.ahcancal.org/ncal/resources/documents/2010%20vrt%20report-final.pdf Administrator turnover and quality of care in nursing homes. Castle NG. Gerontologist. 2001 Dec;41(6):757-67.
Turnover, DON	SYSTEM	AL NH	.	.	2	.	0	5	http://www.ahcancal.org/ncal/resources/documents/2010%20vrt%20report-final.pdf Measuring staff turnover in nursing homes. Castle NG. Gerontologist. 2006 Apr;46(2):210-9.
Turnover, LPN (six month)	SYSTEM	NH	.	.	2	.	0	5	Banaszak-Holl et al. 1996. Factors associated with nursing home staff turnover. Gerontologist, 36(4), 512-517.
Turnover, LPN (Voluntary)	SYSTEM	NH	.	.	2	.	0	5	Donoghue et al. 2006. Voluntary and involuntary nursing home staff turnover. Res Aging, 28, 454-472.
Turnover, NA (six month)	SYSTEM	NH	.	.	2	.	0	5	Banaszak-Holl et al. 1996. Factors associated with nursing home staff turnover. Gerontologist, 36(4), 512-517.
Turnover, NA (voluntary)	SYSTEM	NH	.	.	2	.	0	5	Donoghue et al. 2006. Voluntary and involuntary nursing home staff turnover. Res Aging 28, 454-472.
Turnover, RN (six month)	SYSTEM		.	.	2	.	0	5	Banaszak-Holl et al. 1996. Factors associated with nursing home staff turnover. Gerontologist, 36(4), 512-517.
Turnover, RN (voluntary)	SYSTEM	NH	.	.	2	.	0	5	Donoghue et al. 2006. Voluntary and involuntary nursing home staff turnover. Res Aging, 28, 454-472.
Work Stress Inventory	PERSON	AL NH	2	0	2	1	0	5	Zimmerman et al. 2005. Attitudes, stress, and satisfaction of staff who care for residents with dementia. Gerontologist, 45(S), 96-105
Yeatts and Cready Dimensions of Empowerment Measure	PERSON	NH	1	0	2	2	0	5	Yeatts et al. 2004. Self-managed work teams in nursing homes: Implementing and empowering nurse aide teams. Gerontologist, 44, 256-261.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Job Satisfaction, Overall	PERSON	NH HOSPITAL	2	0	2	0	0	4	Gittell et al. 2008. Impact of relational coordination on job satisfaction and quality outcomes: a study of nursing homes. Human Resource Manage, 18(2), 154-170.
Nursing Home Nurse Aide Job Satisfaction Questionnaire	PERSON	NH	1	0	2	1	0	4	Castle. 2007. Assessing job satisfaction of nurse aides in nursing homes: the Nursing Home Nurse Aide Job Satisfaction Questionnaire. J Gerontol Nur, 33(5), 41-47.
Organizational Commitment	PERSON	NH	1	0	2	1	0	4	Karsh et al. 2005. Job and organizational determinants of nursing home employee commitment, job satisfaction and intent to turnover. Ergonomics, 48(10), 1260-1281.
Work Environment	PERSON	NH	0	0	2	2	0	4	Probst et al. 2010. The relationship between workplace environment and job satisfaction among nursing assistants: findings from a national survey. J Am Med Dir Assoc, 11(4), 246-252.
Home Health or One-on-One Care per 'X' resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
LPN FTE (Full Time Equivalent) per 100 beds	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.
LPN FTE (Full Time Equivalent) per 100 resident days	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.
LPN FTE (Full Time Equivalent) per 100 residents	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5.
Medical Specialist Visits per 'X' resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
NA FTE (Full Time Equivalent) per 100 beds	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5.
NA FTE (Full Time Equivalent) per 100 resident days	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.
NA FTE (Full Time Equivalent) per 100 residents	SYSTEM		.	.	1	.	0	2.5	Spetz et al. 2008. How many nurses per patient? Measurements of nurse staffing in health services research. Health Serv Res, 43(5 Pt 1), 1674-1692. doi: 10.1111/j.1475-6773.2008.00850.x. Epub 2008 May 5. Spetz J, Donaldson N, Aydin C, Brown DS.

Name	System or Person Level[1]	Settings of Care Used[2]	Reliability Score[3]	Validity Score[4]	Ease of Use Score[5]	Interpretability / Utility Score[6]	Benchmark Score[7]	Total Score[8]	Relevant Citation (where available)[9]
Pattern Score, LPN	SYSTEM	NH	.	.	1	.	0	2.5	
Pattern Score, RN	SYSTEM	NH	.	.	1	.	0	2.5	
Resident-Specific Minutes of Care per day	SYSTEM	NH	.	.	1	.	0	2.5	
RN + LPN + NA Hours per resident	SYSTEM	NH	.	.	1	.	0	2.5	Harrington et al. 2003. Nursing home staffing, turnover, and case mix. Med Care Res Rev, 60(3), 366-392.
RN + LPN + NA Hours per resident day	SYSTEM		.	.	1	.	0	2.5	Harrington et al. 2003. Nursing home staffing, turnover, and case mix. Med Care Res Rev, 60(3), 366-392.
RN Cost per resident	SYSTEM	NH	.	.	1	.	0	2.5	
RN Daily Hours per bed	SYSTEM	NH	.	.	1	.	0	2.5	
RN FTE (Full Time Equivalent) per 100 resident beds	SYSTEM	AL NH	.	.	1	.	0	2.5	
RN FTE (Full Time Equivalent) per 100 resident days	SYSTEM	AL NH	.	.	1	.	0	2.5	
RN FTE (Full-Time Equivalent per resident	SYSTEM	AL NH HOSPICE HOSPITAL	.	.	1	.	0	2.5	
RN Hours per resident day	SYSTEM	NH	.	.	1	.	0	2.5	
RNs + LPNs per 100 beds	SYSTEM	NH	.	.	1	.	0	2.5	
RNs + LPNs per 30 beds	SYSTEM	NH	.	.	1	.	0	2.5	
RNs per 100 resident beds	SYSTEM	AL NH	.	.	1	.	0	2.5	
RNs per 100 residents	SYSTEM	AL NH	.	.	1	.	0	2.5	
Turnover, LPN (Involuntary)	SYSTEM	NH	.	.	1	.	0	2.5	
Turnover, NA (Involuntary)	SYSTEM	NH	.	.	1	.	0	2.5	
Turnover, RN (Involuntary)	SYSTEM	NH	.	.	1	.	0	2.5	
Propensity to Leave	PERSON	AL NH HOSPITAL OTHER	0	0	2	0	0	2	Kirschling et al. 2011. Predictors of registered nurses' willingness to remain in nursing. Nurs Econ, 29(3), 111-117.

1 Refers to whether data are collected at the system or person (i.e., individual) level.
2 Settings may not be comprehensive.
3 Not applicable for measures. Overall, if any one of test-retest, inter-rater, or internal consistency reliability ≥.80, scored as 2 (good) ; if .60-.79, scored as 1 (fair); if <.60 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.
4 Not applicable for measures. Overall, if any one of convergent, discriminant, predictive, or concurrent validity ≥.60, scored as 2 (good) ; if .40-.59, scored as 1 (fair); if <.40 or missing, scored as 0 (poor). If no data exist, scored as 0, poor.
5 If it is not time intensive to train/administer and has a simple scoring strategy, scored as 2 (good); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor).
6 Not applicable for measures. Extent to which it informs and captures actionable change in structures or processes (i.e., does not exhibit floor or ceiling effects), scored as 2 (good);); if one or the other, scored as 1 (fair); if neither, scored as 0 (poor). If no data exist, scored as 0, poor. Of note, the extent to which something is "actionable" may be subjective/differ for different organizations.
7 Benchmarks for long-term are external (i.e., does not refer to comparing to oneself).
8 Total scores range from 0-10; higher scores reflect higher quality.
9 Citations are not provided for measures that are described and do not require a reference.

Measures
Measure
Tool
Instrument
Survey
Interview
Inventory
Questionnaire
Scale
Index
Profile
Toolkit
Protocol
Valuation
Assessment
Test
Quality indicator
MESH
Data collection
Interviews as topic
Focus groups
Observation
Psychometrics
Health care surveys
Quality improvement
Quality improvement/organization and administration
Quality improvement/standards
Program evaluation
Quality assurance
Settings of Care
Long-term care
Assisted living
Residential care
Board and care
Senior housing
Home and community based (services and supports)
Dementia care
Memory care
Nursing home
Adult day center
Adult day program
Respite care
Transitional care
Hospital

Green House home	
Small house	
MESH	
Residential facilities	
Group Homes	
Assisted Living Facilities	
Nursing Homes	
Homes for the Aged	
Long-term Care	
Skilled nursing facilities	
Domains of Care	
Person-Centered Care	
Resident direction	
	Culture change
	Resident direction
	Autonomy
	Liberalized meals
	Decision-making
	Choice
	Control
	Self-efficacy
	Stigma
	Ageism
	Dignity
	Respect
Homelike atmosphere	
	Environment
	Lighting
	Sound
	Size
	Non-institutional
	Privacy
	Private rooms
	Private bathroom
Outdoor space	
Dining	
Close relationships	
	Resident-staff relationship
	Personal care
	Resident assistant
	Direct care worker
	Certified nursing assistant
	Front-line caregiver
	Friendship
	Familiarity
	Family support

Informal caregiver
Individualized care
Communication
Staff empowerment
Decision making
Collaborative decision making
Flattened hierarchy
Self-managed workers
Self-managed work team
Staff support
MESH
Patient centered care
Patient centered care/standards
Patient centered care/methods
Patient centered nursing
Nursing homes/trends
Nursing homes/organization and administration
Nursing homes/standards
Homes for the Aged/organization & administration
Homes for the Aged/trends
Homes for the Aged/standards
Health facility environment/standards
Health facility environment/trends
Assisted living facilities/organization & administration
Assisted living facilities/standards
Assisted living facilities/trends
Organizational culture
Organizational innovation
Medical home
Death with dignity
Long-term care/psychology
Frail elderly/psychology
Nurse-patient relations
Nurses aides/psychology
Personal autonomy
Interprofessional relations
Caregiver/standards
Workforce
Turnover
Separation
Termination
Attrition
Intention to leave
Intention to quit
Better jobs better care

Staff stability
Consistent assignment
Staffing ratio
Hours per resident day
Caregiver time with resident
Advancing excellence
Stress
Caregiver burden
Strain
Abuse
Wages
Anxiety
Worker/staff/ nurse satisfaction
MESH
Burnout, professional
Job Satisfaction
Leadership
Nursing Staff/organization & administration*
Models, Nursing
Models, Organizational
Nursing Homes/manpower
Nursing homes/education
Attitude of health personnel
Assisted living facilities/manpower
Assisted living facilities/education
Long-term care/manpower
Long-term care/education
Homes for the aged/manpower
Homes for the aged/education
Personnel staff and scheduling
Personnel staffing and scheduling/organization & administration
Personnel/turnover
Workload/psychology
Personal satisfaction
Job satisfaction
Career mobility
Caregiver/standards
Resident/patient quality outcomes
Physical function
Mobility
Activities of daily living (also dressing, eating, toileting, continence, transferring, showering/bathing)
Rehabilitation – omit this?
Physical activity
Gait speed
Strength

Physical performance
Psychosocial well-being
Cognition
Depression, affect
Quality of life
Engagement
Loneliness
Boredom
Apathy
Suicide
Satisfaction
Resident satisfaction
Family satisfaction
Medical events
Falls
Avoidable hospitalization; potentially avoidable hospitalization
Avoidable emergency department visit; potentially avoidable emergency department visit
Diabetes
Diabetes management
Urinary tract infection
Upper respiratory infection
Death
MESH
Motor activity
Activities of daily living
Exercise/physiology
Exercise/psychology
Psychomotor performance/physiology
Program development
Aggression
Well-being
Quality of life
Risk factors
Social support
Follow-up studies
Outcome assessment
Outcome assessment/health care
Health status
Quality of health care
Dementia
Alzheimer's
Medication Management
Medication and:
Prescribing

Risk
Beers criteria
Administration
Self-administration
Errors
Reconciliation
Management
Preparation

MESH
Clinical competence
Patient satisfaction
Medical order entry systems
Interprofessional relations
Medication therapy management
Electronic health records
Communication
Safety management
Quality of health care
Care Coordination/transitions
Information transmission
Timeliness
Tracking/response
Communication
Efficiency
Readmission
(and) Patient experience
Electronic health/medical records
Health transitions
MESH
Case management, organization and administration
Meaningful use
Regional medical programs, organization and administration
Nursing team, organization and administration

Appendix II: Websites Searched

Grey Resources/Organizations
Administration on Aging/Administration for Community living
Advancing Excellence in America's Nursing Homes
Agency for Healthcare Research and Quality (AHRQ) National Quality Measures Clearinghouse
Aging and Disability Resource Center (ADRC; Technical Assistance Exchange)
AHCA/NCAL
AHRQ
ALFA
Alzheimer's Association
American Medical Director's Association (AMDA)
American Society of Consultant Pharmacists
Artifacts of Culture Change
ASPE
Assisted Living Consumer Alliance
Better Jobs Better Care
California Assisted Living Association
CCAL
CEAL
Centers for Medicare and Medicaid Services Measures Inventory
CES4Health
Collaboration for Homecare Advances in Management and Practice
Concepts in Community Living
ConsultGeri.org (via Hartford Institute for Geriatric Nursing)
Eden Alternative
Green House Project
Health Resources and Services Administration (HRSA)
Home and Community Based Services Clearinghouse
INTERACT
LeadingAge
Long term care Minimum Data Set (from CMS website)
Long-term Living Magazine
McKnights
Medicare Quality Improvement Organization Program
National Council on Aging
National Geriatric Nurses Assocation
National Nursing Assistant Survey
National Nursing Home Survey
National Nursing Home Quality Care Initiative
National Study of Long-term Care Providers
National Survey of Residential Care Facilities

National Transitions of Care Coalition
NQF
Nurses Improving Care for Healthsystem Elders (NICHE)
Nursing Home Compare
National Long-term Care Ombudsman Resource Center (via National Consumer Voice)
PHI (Clearinghouse)
Pioneer Network
Planetree (with Picker Institute)
Provider Magazine
Transitions of Care Portal (via Joint Commission)
Wellspring
Wisconsin Coalition for Collaborative Excellence in Assisted Living

Culture Change Scale (CCS)

			Not at all	Rarely	Some-times	Usually	Always
System–Wide Culture Change	1.	The environment of this facility encourages new ideas.	1	2	3	4	5
	2.	We are encouraged to develop new ways to deliver resident care and services.	1	2	3	4	5
	3.	There is a commitment to education and training in this facility.	1	2	3	4	5
	4.	This facility uses interdepartmental teams to solve problems.	1	2	3	4	5
	5.	Line staff actively participate in quality-improvement efforts in this facility.	1	2	3	4	5
	6.	Job expectations are understood by all facility teams.	1	2	3	4	5
	7.	We measure the effectiveness of our care and services.	1	2	3	4	5
	8.	A system to monitor quality is in place in this facility.	1	2	3	4	5
	9.	Our facility continuously evaluates our care and services to change future care and services.	1	2	3	4	5
	10.	We use data to identify what our facility is doing well.	1	2	3	4	5
	11.	The data we collect help identify problems with services.	1	2	3	4	5
	12.	We continually try to improve how we use data.	1	2	3	4	5
	13.	This facility supports the career development of staff.	1	2	3	4	5
	14.	This facility educates and trains people on how to identify and solve problems.	1	2	3	4	5
	15.	This facility is committed to supporting resident-directed care.	1	2	3	4	5
	16.	Our leadership staff encourages all employees to participate in resident-directed care.	1	2	3	4	5
	17.	How much this facility is committed to supporting staff training and development?	1	2	3	4	5
	18.	How much this facility uses interdepartmental teams to solve problems?	1	2	3	4	5
Resident Choice	1.	How often can residents eat what they really want?	1	2	3	4	5
	2.	How often can residents eat when they really want?	1	2	3	4	5
	3.	How often can residents keep their own food in a refrigerator?	1	2	3	4	5
	4.	How often can residents go to bed when they really want?	1	2	3	4	5

		Not at all	Rarely	Some-times	Usually	Always
	5. How often can residents get up when they really want?	1	2	3	4	5
	6. How often can residents spend time doing activities that they really choose whenever they want?	1	2	3	4	5
	7. How often can residents make important decisions affecting their daily lives on the unit (neighborhood or household) that go beyond their care plan?	1	2	3	4	5
Organizational Design	1. How often are decisions made on your unit (neighborhood or household) based on input from you and your coworkers?	1	2	3	4	5
	2. How often are decisions made using group processes (such as small group meetings) to reach agreement about important matters?	1	2	3	4	5
	3. How often do you do things on your unit that are not part of your primary discipline or departmental role?	1	2	3	4	5
	4. How often can you decide who will do what on your shift?	1	2	3	4	5
	5. How often can you give input that is used in a resident's care plan?	1	2	3	4	5
	6. How often are you allowed to make decisions about how you do your work?	1	2	3	4	5
	7. How much does the top leadership team at this facility include representatives from your unit?	1	2	3	4	5
	8. How much influence does staff from your unit have in developing policies and procedures?	1	2	3	4	5
	9. How much do department heads at your facility do things that are outside their own disciplines?	1	2	3	4	5
	10. How much are staff on your unit encouraged to develop new ways to deliver resident care and services?	1	2	3	4	5
	11. How much do staff on your unit actively participate to solve problems together?	1	2	3	4	5
Empowering Supervision	1. My immediate supervisor responds to concerns in a timely manner.	1	2	3	4	5
	2. My immediate supervisor treats me fairly.	1	2	3	4	5
	3. I am encouraged to think of better ways of doing things.	1	2	3	4	5
	4. I have the opportunity to participate in decision-making.	1	2	3	4	5

			Not at all	Rarely	Some-times	Usually	Always
	5.	My job allows me to develop new knowledge and skills.	1	2	3	4	5
Job Design	1.	My job duties allow me enough time to do my job properly.	1	2	3	4	5
	2.	The work assignments are well planned in my facility team.	1	2	3	4	5
	3.	This facility works to find staffing practices to improve resident care and service.	1	2	3	4	5
Decision Making	1.	How often does top management (e.g., administrator, director of nursing) make decisions about important matters without input from you and your coworkers?	1	2	3	4	5
	2.	How often does departmental leadership (e.g., nursing, housekeeping, activities, or food service) make decisions about important matters without input from you and your coworkers?	1	2	3	4	5
Overall CCS	1.	How often are you assigned to your unit (neighborhood or household) for three months or longer?	1	2	3	4	5
	2.	How often are you assigned to other units in this facility?	1	2	3	4	5

Experience of Home Scale

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	Embraced by this place	1	2	3	4	5
2.	Connected to people I love here	1	2	3	4	5
3.	Among my own people here	1	2	3	4	5
4.	Invested some of my self in this place	1	2	3	4	5
5.	Feel cared for here	1	2	3	4	5
6.	Feel like I belong here	1	2	3	4	5
7.	This place feels personal	1	2	3	4	5
8.	Look forward to coming back	1	2	3	4	5
9.	Feel protected	1	2	3	4	5
10.	Feeling of warmth and coziness	1	2	3	4	5
11.	In harmony with my surroundings	1	2	3	4	5
12.	Feel at home here	1	2	3	4	5
13.	Treated as an individual	1	2	3	4	5
14.	Cherished objects around me	1	2	3	4	5
15.	Feel welcome	1	2	3	4	5
16.	Cold and sterile	1	2	3	4	5
17.	Isolated	1	2	3	4	5
18.	Feel cut off from my life	1	2	3	4	5
19.	Feel like an outsider	1	2	3	4	5
20.	Surrounded by strangers	1	2	3	4	5
21.	A place or space of my own	1	2	3	4	5
22.	Favorite spots I spend time in	1	2	3	4	5
23.	Choose how to spend my time	1	2	3	4	5
24.	Have privacy	1	2	3	4	5
25.	Free to make choices here	1	2	3	4	5

Person-Centered Climate Questionnaire (PCQ-P)

		Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
1.	Staff are knowledgeable	1	2	3	4	5	6
2.	I receive the best possible care	1	2	3	4	5	6
3.	I feel safe	1	2	3	4	5	6
4.	I feel welcome	1	2	3	4	5	6
5.	It is easy to talk to staff	1	2	3	4	5	6
6.	Staff takes notice of what I say	1	2	3	4	5	6
7.	Staff come quickly when I need them	1	2	3	4	5	6
8.	Staff talk to me so that I can understand	1	2	3	4	5	6
9.	[It] is neat and clean	1	2	3	4	5	6
10.	Staff seem to have time for residents	1	2	3	4	5	6
11.	That has something nice to look at (such as nice views, or artwork)	1	2	3	4	5	6
12.	[It] feels like home	1	2	3	4	5	6
13.	It is possible to get unpleasant thoughts out of your head	1	2	3	4	5	6
14.	People talk about everyday life and not just illness	1	2	3	4	5	6
15.	Staff make extra efforts for my comfort	1	2	3	4	5	6
16.	I can make choices (e.g., what to wear or eat)	1	2	3	4	5	6
17.	I can get that ''little bit extra''	1	2	3	4	5	6

Assisted Living Environmental Quality Scale (AL-EQS)

MAINTENANCE

1. Rate the general maintenance of each of the following areas.

	a. Shared Social Spaces	b. Halls	c. Residents' Rooms	d. Residents' Bathrooms
			# rooms with feature	
Well maintained	2	2		
In need of some repairs	1	1		
In need of extensive repairs	0	0		
Number of rooms observed				

CLEANLINESS

2. Rate the general cleanliness of each of the following areas.

	a. Shared Social Spaces	b. Halls	c. Residents' Rooms	d. Residents' Bathrooms
			# rooms with feature	
Very clean	2	2		
Moderately clean	1	1		
Poor level of cleanliness	0	0		
Number of rooms observed				

HANDRAILS

3. To what extent are handrails present in this area?

	a. Hallways	b. Bathrooms
		# rooms with feature
Extensively	2	
Somewhat	1	
Little or None	0	
Number of bathrooms observed		

CALL BUTTONS

4. To what extent are call buttons present in resident rooms and bathrooms?
   (Count call button as present for both room and bathroom if resident wears a device that summons staff.)

_____ # rooms with call buttons   _____ # bathrooms with call buttons

_____ # rooms observed   _____ # bathrooms observed

LIGHTING

5. Rate the light intensity in hallways, activity areas, and residents' rooms.

	a. Hallways	b. Activity Areas	c. Residents' Rooms # rooms with feature
Ample	2	2	
Good	1	1	
Barely Adequate/Inadequate	0	0	
Number of rooms observed			

6. To what extent is glare present in hallways, activity areas, and residents' rooms?

	a. Hallways	b. Activity Areas	c. Residents' Rooms # rooms with feature
A little or none	2	2	
In a few areas	1	1	
In many areas	0	0	
Number of rooms observed			

7. Is lighting even in the hallways, activity areas and in residents' rooms?

	a. Hallways	b. Activity Areas	c. Residents' Rooms # rooms with feature
Even throughout the area	2	2	
Mostly even throughout the area	1	1	
Uneven; many shadows throughout the area	0	0	
Number of rooms observed			

HALLWAY LENGTH

8. Which of the following describes the configuration of most of the rooms/spaces in the area?

    No hallways; rooms open into living (common) area…………..….……   2
    Short hallways...……   1
    Long hallways..……   0

HOMELIKE FURNITURE and OTHER PERSONALIZING FEATURES

9. To what extent do the public areas contain furniture, decorations, and other features that give them a homelike (residential as opposed to institutional) atmosphere?

    Very homelike (75% or more of public areas are "residential")……………   3
    Moderately homelike (50-74% of the public areas are "residential")……   2
    Somewhat homelike (25-49% of public areas are "residential")…………..   1
    Not homelike (less than 25% of the public areas are "residential")………   0

10.   To what extent is/are the following present in resident rooms?

	# rooms with feature
a. Non-institutional furniture	
b. Individual heating controls	
c. Individual air conditioning controls	
d. Telephone or telephone connection	
Number of resident rooms observed	

11. Are residents routinely able to lock doors to resident rooms, apartments, or suites?

	# rooms with feature	# rooms observed
a) Door can be locked or latched from the inside		
b) Door can be locked from the outside		

TACTILE and VISUAL STIMULATION

12 & 13. Are opportunities for stimulation easily available for residents?

	a. Tactile	b. Visual
Extensively (in several program areas and in hallways)	3	3
Quite a bit (at least in one program area and in hallways)	2	2
Somewhat (only in a specific program area)	1	1
None (no source of stimulation)	0	0

OUTDOOR AREAS

14. Overall, how attractive and functional is/are any outdoor area(s)?

	a. Attractive	b. Functional
Very	2	2
Somewhat	1	1
Not at all	0	0
No outdoor areas	9	9

PRIVACY

15a. How is privacy accommodated in resident bedrooms?

	# rooms with feature
a) Private room	
b) Privacy curtain	
c) Other	
# resident rooms observed	

If "other", describe_____.

15b. What access to a toilet is available to occupants of resident rooms?

Type of access directly from room	# rooms with feature
a. Private toilet	
b. Semi-private toilet	
c. Shared toilet with bath and/or shower	
d. No direct toilet or bath/shower from room	
Number of bedrooms observed	

Medication Administration Practices (MAP)

I. Infection Control

1. Where do you discard a used lancet or syringe?

₁☐ The wastebasket in the resident's room
₂☐ The kitchen wastebasket
₃☐ A plastic bag
₄☐ A leakproof, puncture resistant container, such as a sharps container
₅☐ Somewhere else:

_____

2. When administering medication to a resident's eye, do you wash your hands in the following situations?

₁A)	Immediately before administering the eye medication	☐ Yes	☐ No
₂B)	A short while before administering the eye medication	☐ Yes	☐ No
₃C)	Immediately after administering the eye medication	☐ Yes	☐ No
₄D)	A short while after administering the eye medication	☐ Yes	☐ No

II. Medication Monitoring

3. Are the following statements about medication errors true?

₁A)	They can interfere with how effective the medication will be	☐ Yes	☐ No
₂B)	They can produce bad reactions	☐ Yes	☐ No
₃C)	They can threaten a resident's life	☐ Yes	☐ No
₄D)	They can lead to hospitalization	☐ Yes	☐ No

4. Do you believe medication can cause a resident to be confused?

₁☐ No
₂☐ Yes

5. Are the following symptoms of a side effect of a medication?

₁A)	Change in behavior	☐ Yes	☐ No
₂B)	Rash / itching	☐ Yes	☐ No
₃C)	Change in swallowing	☐ Yes	☐ No
₄D)	Change in mobility or walking	☐ Yes	☐ No

6. When administering antihypertensive medications, do you routinely monitor the following?

₁A)	Weight	☐ Yes	☐ No
₂B)	Heart rate	☐ Yes	☐ No
₃C)	Respiratory rate	☐ Yes	☐ No
₄D)	Blood pressure	☐ Yes	☐ No

7. If a resident is prescribed a blood thinner (such as Warfarin) and you witness the following symptoms, which ones would you report to someone with more medical training?

₁A)	Increased urination	☐ No, would not report ☐ Yes, would report
₂B)	Change in bowel habits	☐ No, would not report ☐ Yes, would report
₃C)	Increased weight	☐ No, would not report ☐ Yes, would report

8. If you were about to administer insulin to a resident who appears shaky and disorientated, which of these would you do?

- 1☐ Administer the insulin
- 2☐ Check his/her blood sugar
- 3☐ Wait, but come back in 5 minutes to administer the insulin
- 4☐ Administer the insulin with a glass of orange juice
- 5☐ None of these

9. Would you administer bisphosphonates (such as risedronate [Actonel] or alendronate [Fosamax]) in the following manners?

		Yes	No
1A)	At the same time as other medications	☐ Yes	☐ No
2B)	On an empty stomach with a full 8 oz glass of water	☐ Yes	☐ No
3C)	At the same time as breakfast	☐ Yes	☐ No
4D)	Have the resident sit upright or stand for 30 minutes afterwards and take it with a full glass of water	☐ Yes	☐ No

10. When administering digoxin, how frequently do you check the pulse?

- 1☐ Every night during the evening rounds
- 2☐ Immediately before the dose is to be administered
- 3☐ Once a week
- 4☐ When time permits
- 5☐ Never, it is not necessary

11. When administering sleeping aid medications to residents, which of these symptoms do you watch for?

- 1☐ Constipation
- 2☐ Bruising and bleeding
- 3☐ Dizziness and falling
- 4☐ Nausea and vomiting
- 5☐ None of these are watched for

III. Regulation/Documentation

12. In your facility, when do you transcribe medication orders onto the Medication Administration Record (MAR)?

- 1☐ After the medication arrives from the pharmacy
- 2☐ After the family brings in the medication
- 3☐ Only after a physician's order for the medication is received by the facility
- 4☐ Other: _____

13. In your facility, which of these are documented on the MAR for PRN (as needed) medications?

		Yes	No
1A)	The amount or quantity of medication administered	☐ Yes	☐ No
2B)	The specific time of administration	☐ Yes	☐ No
3C)	The initials of the person administering the medication	☐ Yes	☐ No
4D)	The effectiveness of the medication	☐ Yes	☐ No

14. In your facility, do you document on the MAR when a medication is:

1A)	Administered	☐ No, do not document	☐ Yes, document
2B)	Refused	☐ No, do not document	☐ Yes, document
3C)	Omitted	☐ No, do not document	☐ Yes, document

15. When do you sign off on medications on the MAR?	1□ Immediately after a resident has been observed to take the medication 2□ Immediately after all the residents have been administered their medications and observed to take them 3□ Immediately after the medication label is checked with the MAR 4□ Immediately before the county or state visits the setting 5□ Other: _____

16. What do you do about documenting a resident's allergies?	1A) Document them on the MAR □ Yes □ No 2B) Document them on the resident's record □ Yes □ No 3C) Document them by placing a sign above the bed □ Yes □ No 4D) Nothing is done to document allergies □ Yes □ No

17. In your facility, in which of these situations do you check the medication label against the MAR three times?	1□ With each medication administered to each resident 2□ If the staff member is new to the facility 3□ If you do not know the resident 4□ If it is a new medication order 5□ None of these

IV. Administration

18. You receive an order for Nitroglycerin to be given **sublingually**. It would be given:	1□ Under the tongue 2□ By mouth 3□ In the ear 4□ As a patch 5□ Chewed or swallowed

19. Do residents in this facility have a right to refuse medications?	1□ No 2□ Yes

20. What do you do if a medication arrives from the pharmacy and there is no order for the medication on the MAR?	1□ Copy the directions on the medication label onto the MAR 2□ Administer the medication according to the directions on the medication label 3□ Look in the resident's record for an order and/or notify the supervisor, nurse, or pharmacist 4□ Omit the medication and write a note for the next shift to check it 5□ Other: _____

21. If you have an alert and oriented resident with no diagnosis of dementia who refuses all of his morning medications by saying the medications do not help him and he doesn't need them, what do you do?	1□ Encourage him to take the medications by explaining the importance and purpose of the medications 2□ Tell him "Your doctor said that you must take this medication," and that you will not leave until he takes them 3□ Hide the medication in his food or drink 4□ Leave the medications with him in case he decides to take them later 5□ Other: _____

V. Technique of Administration

22. When do you shake an inhaler?

$_1\square$ Before each and every time you use it
$_2\square$ After each and every time you use it
$_3\square$ If the physician orders more than one puff to be administered to the resident
$_4\square$ If it becomes clogged
$_5\square$ Never – an inhaler should not be shaken

23. Do you follow these practices after administering nose drops to a resident?

$_1$A) Blow their nose — $\square$ Yes — $\square$ No
$_2$B) Remain with their head tilted slightly back for about one minute — $\square$ Yes — $\square$ No
$_3$C) Remain with their head tilted slightly forward for a few minutes — $\square$ Yes — $\square$ No

24. Do you follow these practices when measuring liquids?

$_1$A) A teaspoon or tablespoon from the kitchen is used and is measured at eye level — $\square$ Yes — $\square$ No
$_2$B) A medication cup is used and is placed on a flat surface and measured at eye level — $\square$ Yes — $\square$ No
$_3$C) Sometimes the amount of medication is approximated — $\square$ Yes — $\square$ No

25. Do you follow these practices when administering two or more different eye drops at the same time?

$_1$A) Wash your hands before and after administration of the eye drops — $\square$ Yes — $\square$ No
$_2$B) Wear gloves — $\square$ Yes — $\square$ No
$_3$C) Allow 3-5 minutes between the administration of each eye medication — $\square$ Yes — $\square$ No
$_4$D) Sign/initial the MAR after the administration of each type of eye drop — $\square$ Yes — $\square$ No

26. Do you follow these techniques when administering a patch, such as a nitroglycerin patch?

$_1$A) Apply the patch to the same area each time — $\square$ Yes — $\square$ No
$_2$B) Apply the patch to a different area each time — $\square$ Yes — $\square$ No
$_3$C) Apply the patch to a clean, dry area that is free of hair — $\square$ Yes — $\square$ No
$_4$D) Apply the patch to the belly-button — $\square$ Yes — $\square$ No

VI. Terminology

For each of these, please check the <u>one</u> box that means the same as the word provided.

27. Hour of sleep or bedtime

$_1\square$ qod or QOD
$_2\square$ qd or QD
$_3\square$ bid or BID
$_4\square$ sq or SQ
$_5\square$ HS or qhs

28. Twice a day

$_1$☐ qod or QOD
$_2$☐ qd or QD
$_3$☐ bid or BID
$_4$☐ sq or SQ
$_5$☐ HS or qhs

29. Subcutaneous

$_1$☐ qod or QOD
$_2$☐ qd or QD
$_3$☐ bid or BID
$_4$☐ sq or SQ
$_5$☐ HS or qhs

30. Every other day

$_1$☐ qod or QOD
$_2$☐ qd or QD
$_3$☐ bid or BID
$_4$☐ sq or SQ
$_5$☐ HS or qhs

31. Once a day

$_1$☐ qod or QOD
$_2$☐ qd or QD
$_3$☐ bid or BID
$_4$☐ sq or SQ
$_5$☐ HS or qhs

32. Milligram

$_1$☐ pc
$_2$☐ mg
$_3$☐ OTC
$_4$☐ gm
$_5$☐ po

33. After meals

$_1$☐ pc
$_2$☐ mg
$_3$☐ OTC
$_4$☐ gm
$_5$☐ po

34. By mouth

$_1$☐ pc
$_2$☐ mg
$_3$☐ OTC
$_4$☐ gm
$_5$☐ po

35. Before meals

$_1$☐ tsp
$_2$☐ ac
$_3$☐ PRN
$_4$☐ q
$_5$☐ qid or QID

36. Four times a day

$_1$☐ qid or QID
$_2$☐ qd or QD
$_3$☐ bid or BID
$_4$☐ sq or SQ
$_5$☐ HS or qhs

37. As needed

1☐ tsp
2☐ ac
3☐ PRN
4☐ q
5☐ qid or QID

38. Three times daily

1☐ tid or TID
2☐ ml
3☐ oz
4☐ Tbsp
5☐ MAR

39. Is a milliliter the same as a milligram?

1☐ No
2☐ Yes

40. If an order for ibuprofen is to be administered 400 mg q 8 hours, how many milligrams would a resident receive in a 24-hour period?

1☐ 800 mg
2☐ 1000 mg
3☐ 1200 mg
4☐ 1400 mg

VII. Charting and Documentation

Check the one box that is correct in your experience. *Please refer to the MAR example on the back page.*

41. The physician ordered Darvocet N-100 1 tablet every 4 hours by mouth as needed for pain. The medication order for Darvocet is not transcribed correctly on the MAR because:

1☐ Specific administration times should not be scheduled for a prn medication
2☐ Administration times on the MAR should include 12PM and 4PM
3☐ Administration times on the MAR should include 10AM and 1PM
4☐ Administration times on the MAR should include 10AM, 12PM, 2PM, and 4PM

42. On 02/09, the physician discontinued Lasix 40mg by mouth once daily and ordered Lasix 40mg by mouth twice daily. Were the orders for Lasix correctly transcribed on the MAR?

1☐ No
2☐ Yes

43. On 02/06, the physician ordered Coumadin 5mg by mouth every other day. Your facility did not receive the Coumadin until 02/13. According to the MAR, was the Coumadin administered as ordered?

1☐ No
2☐ Yes

44. The physician ordered Tylenol 325mg 1 to 2 tablets by mouth twice daily. Is the documentation for the administration of the Tylenol correct on the MAR?

1☐ No
2☐ Yes

45. On 02/03, the physician ordered Amoxicillin 250mg by mouth 3 times daily for 10 days. According to the MAR, was the Amoxicillin administered as ordered?

₁☐ No
₂☐ Yes

46. The physician ordered Nitro-Dur (Nitroglycerin) 0.4mg patch with directions to apply one patch every morning and remove at bedtime. Was the Nitroglycerin patch administered as ordered, according to the MAR?

₁☐ No
₂☐ Yes

47. On 02/08, the physician increased Capoten 25mg three times daily to Capoten 50mg three times daily. Was the Capoten order for 50mg three times daily transcribed correctly on the MAR?

₁☐ No
₂☐ Yes

48. When administering medications, is it okay to leave a resident's medication at the bedside if the resident is alert and oriented?

₁☐ No
₂☐ Yes

MEDICATION ADMINISTRATION RECORD

DARVOCET-N-100 — Take 1 tablet by mouth every 4 hours as needed for pain.

Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
8AM	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J		
8PM	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C		

LASIX 40mg. — Take 1 tablet by mouth ~~once~~ **twice** every day

Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
8AM	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J		
4PM						J	C	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C					

COUMADIN 5mg. — Take 1 tablet by mouth every other day.

Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
6PM	→	→	→	→	→	→	→	→	→	→	→	→	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C		

TYLENOL 325mg — Take 1 to 2 tablets by mouth twice daily.

Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
8AM	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J		
8PM	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C		

AMOXICILLIN 250mg — Take 1 capsule by mouth 3 times daily for 10 days.

Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
8AM	→	→	→	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J		
2PM	→	→	→	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J		
8PM	→	→	→	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C		

NITRO-DUR 0.4mg/hr PATCH ---- Apply 1 patch every morning and remove at bedtime

Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
8AM	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J		

CAPOTEN ~~25mg~~ 50mg — Take 1 tablet by mouth 3 times daily.

Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
8AM	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J		
2PM	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J	J	T	T	T	T	T	J	J	J	J		
8PM	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	C	C	C	C		

Charting for the month of:	2/01/00 through 2/29/00
Physician:	Dr. Moses
Telephone #	919-555-1212
Medical Record #:	
Alt. Physician:	
Alt. Physician Telephone #:	
Allergies:	No Known Allergies (NKA)
Rehabilitation Potential:	
Diagnosis:	Congestive Heart Failure, Hypertension
Admission Date:	5/03/96
Resident:	Slippery Raccoon
Date of Birth:	10/17/30
Room / bed #:	BW999

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Unnecessary Drug Use Measure

Using the Medication Appropriateness Index (MAI), rate each medication as appropriate (A), marginal (B), or inappropriate (C) in terms of lack of indication, lack of therapeutic effectiveness, and therapeutic duplication.

Definitions, instructions for rating, and examples are provided.

1. Lack of indication
2. Lack of effectiveness
3. Therapeutic duplication

For additional information, see http://ac.els-cdn.com/S1543594609000038/1-s2.0-S1543594609000038-main.pdf?_tid=6c890c64-c434-11e5-8e88-00000aab0f26&acdnat=1453816694_ead4a45e0f2e17f14758a201ede9d835

Care Transitions Measure (CTM-15)

	Strongly disagree	Disagree	Agree	Strongly agree
1. Before I left the hospital, the staff and I agreed about clear health goals for me and how these would be reached.	1	2	3	4
2. The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital.	1	2	3	4
3. The hospital staff took my preferences and those of my family or caregiver into account in deciding where my health care needs would be met when I left the hospital.	1	2	3	4
4. When I left the hospital, I had all the information I needed to be able to take care of myself.	1	2	3	4
5. When I left the hospital, I clearly understood how to manage my health.	1	2	3	4
6. When I left the hospital, I clearly understood the warning signs and symptoms I should watch for to monitor my health condition.	1	2	3	4
7. When I left the hospital, I had a readable and easily understood written plan that described how all of my health care needs were going to be met.	1	2	3	4
8. When I left the hospital, I had a good understanding of my health condition and what makes it better or worse.	1	2	3	4
9. When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.	1	2	3	4
10. When I left the hospital, I was confident that I knew what to do to manage my health.	1	2	3	4
11. When I left the hospital, I was confident I could actually do the things I needed to do to take care of my health.	1	2	3	4
12. When I left the hospital, I had a readable and easily understood written list of the appointments or tests I needed to complete within the next several weeks.	1	2	3	4
13. When I left the hospital, I clearly understood the purpose for taking each of my medications.	1	2	3	4
14. When I left the hospital, I clearly understood how to take each of my medications, including how much I should take and when.	1	2	3	4
15. When I left the hospital, I clearly understood the possible side effects of each of my medications.	1	2	3	4

Care Transitions Measure (CTM-3)

	Strongly disagree	Disagree	Agree	Strongly agree
1. The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital.	1	2	3	4
2. When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.	1	2	3	4
3. When I left the hospital, I clearly understood the purpose for taking each of my medications.	1	2	3	4

Family Perception of Physician-Family Caregiver Communication (FPPFC)

These questions are about *[RESIDENT'S]* doctor, meaning all doctors, nurse practitioners or physicians' assistants, but not nursing staff. They refer to the last three months of the *[RESIDENT'S]* life.

To what extent to you disagree or agree that…	Strongly disagree	Disagree	Agree	Strongly agree
1. The doctor always kept you or other family members informed about *[RESIDENT'S]* condition.	1	2	3	4
2. You or other family members always received information from the doctor about what to expect while *[RESIDENT]* was dying.	1	2	3	4
3. *[RESIDENT'S]* doctor always helped you or other family members to understand what he or she was saying to you about what to expect while *[RESIDENT]* was dying. *Note: If the respondent states that they did not receive information from the doctor while the resident was dying (per item 2), then this item should be coded '1', strongly disagree.*	1	2	3	4
4. The doctor always spoke to you, other family members or *[RESIDENT]* about *[HIS/HER]* wishes for medical treatment at the end of life.	1	2	3	4
5. You, other family members or *[RESIDENT]* always had the opportunity to ask questions to the doctor about *[HIS/HER]* care.	1	2	3	4
6. The doctor always listened to what you, other family member or *[RESIDENT]* had to say about *[HIS/HER]* medical treatment and end-of-life care.	1	2	3	4
7. The doctor always understood what you, other family members and *[RESIDENT]* were going through.	1	2	3	4

CORE-Q

		Poor	Average	Good	Very Good	Excellent
1.	In recommending this facility to your friends and family, how would you rate it overall?	1	2	3	4	5
2.	Overall, how would you rate the staff?	1	2	3	4	5
3.	How would you rate the care you receive?	1	2	3	4	5
4.	Overall, how would you rate the food?	1	2	3	4	5

Activities of Daily Living Unmet Needs*

	Have difficulty performing	Received help with activity	Need help with activity	Need more help with activity
1. During the past month, did you experience discomfort because you were not able to bathe as often as you would have liked?				
2. During the past month, did you experience a burn or scald caused by bathing with water that was too hot?				
3. During the past month, did you experience discomfort because you were not able to change your clothes as often as you would have liked because you did not have help?				
4. During the past month, were there times you were unable to eat when you were hungry because no one was available to help you eat?				
5. How often do you move around your [house/apartment/room]? Would you say (1) whenever you want, (2) often enough to stretch and have a change of scenery now and then, (3) often enough to take care of toileting needs but not much more than that, or (4) not often enough even to use the bathroom?				
6. During the past month, did you experience discomfort because you did not have help getting to the bathroom or changing soiled clothing as often as you needed to?				
7. During the past month, did you wet or soil yourself because you did not have help getting to the bathroom, using a bed pan or using a commode?				

*Items assigned to each response (e.g., 0, 1, 2, 3; or 1, 2, 3, 4; or other numerals) were not reported.

Alzheimer Disease Related Quality of Life (ADRQL™)

Interviewer: Read the following instructions aloud to the respondent.

Quality of life means how someone feels about different areas of his or her life. To find out about quality of life, people are usually asked to answer questions about themselves. Because of the effects of dementia, it is hard to ask people with this illness questions about their own lives. Instead, this questionnaire has been developed so that it can be answered by someone who spends time with and cares for a person with dementia.

There are several areas that make up a person's quality of life. I will briefly describe each area and then I will read statements about these. As I read each statement, please think about Mr/Mrs/Ms _____ and whether the statement describes him/her over the last 2 weeks. If you agree that the statement describes Mr/Mrs/Ms _____ over the last 2 weeks, please answer "Agree." If you disagree, because the statement does not describe Mr/Mrs/Ms _____ over the last 2 weeks, please answer "Disagree."

Let me give you an example. I might read the statement, "He/She does not respond to his/her own name." If this statement describes Mr/Mrs/Ms _____ over the last 2 weeks, you should say "Agree." If the statement, "He/She does not respond to his/her own name," does not describe him/her in the last 2 weeks, you should answer "Disagree." Do you have any questions?

Interviewer: Pause, respond to any questions and finish reading these instructions aloud.

I am going to begin the questionnaire now. Please tell me if you want me to speak louder, slow down, repeat a statement or stop so you can think about a statement. Also let me know if you want me to review the instructions.

Interviewer: Read aloud the introductory statements and each item exactly as they are written in sections A-E below. Place an __X__ in one box to the right of each item in the correct response column.

---

1. These statements are about <u>relating to and being around other people</u>. After each statement, please answer "Agree" if the statement describes Mr/Mrs/Ms _____ in the last 2 weeks or answer "Disagree" if it does not.

		AGREE	DISAGREE
A1.	He/She smiles or laughs when around other people	☐	☐
A2.	He/She does not pay attention to the presence of others	☐	☐
A3.	He/She will stay around other people	☐	☐
A4.	He/She seeks contact with others by greeting people or joining in conversations	☐	☐
A5.	He/She talks with people	☐	☐
A6.	He/She touches or allows touching such as handshakes, hugs, kisses, pats	☐	☐
A7.	He/She can be comforted or reassured by others	☐	☐
A8.	He/She reacts with pleasure to pets or small children	☐	☐
A9.	He/She smiles or laughs or is cheerful	☐	☐
A10.	He/She shows delight	☐	☐
A11.	He/She shows a sense of humor	☐	☐
A12.	He/She sits quietly and appears to enjoy the activity of others even though he/she is not actively participating	☐	☐

---

2. These statements are about <u>a person's special identity and important relationships</u>. After each statement, please answer "Agree" if the statement describes Mr/Mrs/Ms _____ in the last 2 weeks or answer "Disagree" if it does not.

		AGREE	DISAGREE
B1.	He/She talks about or still does things related to his/her previous work or daily activities	☐	☐
B2.	He/She is aware of his/her place in the family such as being a husband/wife, parent, or grandparent	☐	☐
B3.	He/She makes or indicates choices in routine daily activities such as what to wear, what to eat, or where to sit	☐	☐
B4.	He/She shows interest in events, places or habits from his/her past such as old friends, former residences, church or prayer	☐	☐
B5.	He/She does not respond to his/her own name	☐	☐
B6.	He/She does not express beliefs or attitudes that he/she always had	☐	☐
B7.	He/She talks with people on the telephone	☐	☐
B8.	He/She gets enjoyment from or is calmed by his/her possessions or belongings	☐	☐

(Continued)

3. These statements are about <u>different types of behavior</u> in the last 2 weeks. After each statement, please answer "Agree" if the statement describes Mr/Mrs/Ms _____ in the last 2 weeks or answer "Disagree" if it does not.

			AGREE	DISAGREE
C1.	He/She squeezes, twists or wrings his/her hands	C1.	☐	☐
C2.	He/She throws, hits, kicks or bangs objects	C2.	☐	☐
C3.	He/She calls out or yells or curses or makes accusations	C3.	☐	☐
C4.	He/She locks or barricades himself/herself in his/her room/house/apartment	C4.	☐	☐
C5.	He/She is irritable or easily angered	C5.	☐	☐
C6.	He/She cries, wails, or frowns	C6.	☐	☐
C7.	He/She is restless and wound up, or repeats actions such as rocking, pacing, or banging against walls	C7.	☐	☐
C8.	He/She resists help in different ways such as with dressing, eating or bathing, or by refusing to move	C8.	☐	☐
C9.	He/She appears to be content or satisfied	C9.	☐	☐
C10.	He/She becomes upset or angry when approached by another person	C10.	☐	☐
C11.	He/She pushes, grabs or hits people	C11.	☐	☐
C12.	He/She is upset or unsettled in his/her living environment	C12.	☐	☐

4. These statements are about <u>usual activities</u> in the last 2 weeks. After each statement, please answer "Agree" if the statement describes Mr/Mrs/Ms _____ in the last 2 weeks or answer "Disagree" if it does not.

			AGREE	DISAGREE
D1.	He/She enjoys doing activities alone such as listening to music or watching TV	D1.	☐	☐
D2.	He/She does <u>not</u> take part in activities he/she used to enjoy, even when encouraged to take part	D2.	☐	☐
D3.	He/She shows <u>no</u> signs of pleasure or enjoyment when taking part in leisure activities or recreation	D3.	☐	☐
D4.	He/She dozes off or does nothing most of the time	D4.	☐	☐

5. The last statements are about <u>behavior in a person's living environment</u>. After each statement, please answer "Agree" if the statement describes Mr/Mrs/Ms _____ in the last 2 weeks or answer "Disagree" if it does not.

			AGREE	DISAGREE
E1.	He/She talks about feeling unsafe or says his/her belongings are <u>not</u> safe	E1.	☐	☐
E2.	He/She is upset or unsettled when in places other than where he/she lives	E2.	☐	☐
E3.	He/She talks about wanting to leave or go home	E3.	☐	☐
E4.	He/She says he/she wants to die	E4.	☐	☐

That concludes the questionnaire. Thank you very much for your help.

Ohio Nursing Home Family Satisfaction Survey (2012)

	Never	Hardly ever	Sometimes	Always	Doesn't apply
Admissions					
1. Did the staff provide you with adequate information about the different services in the facility?	1	2	3	4	7
2. Did the staff give you clear information about the [daily rate] cost of care?	1	2	3	4	7
3. Did the staff adequately address your questions about how to pay for care (private pay, Medicare, Medicaid)?	1	2	3	4	7
Social Services					
4. Does the social worker follow-up and respond quickly to your concerns?	1	2	3	4	7
5. Does the social worker treat you with respect?	1	2	3	4	7
Activities					
6. Does the resident have enough to do in the facility?	1	2	3	4	7
7. Are the facility activities things the resident likes to do?	1	2	3	4	7
8. Is the resident satisfied with the spiritual activities in the facility?	1	2	3	4	7
9. Do the activities staff treat the resident with respect?	1	2	3	4	7
Choice					
10. Can the resident get out of bed in the morning when he/she likes?	1	2	3	4	7
11. Can the resident go to bed when he/she likes?	1	2	3	4	7
12. Can the resident choose the clothes that he/she wears?	1	2	3	4	7
13. Can the resident fix his/her room with personal items so it looks like home?	1	2	3	4	7
14. Does the staff leave the resident alone if he/she doesn't want to do anything?	1	2	3	4	7
15. Does the staff let the resident do the things he/she wants to do for himself/herself?	1	2	3	4	7
16. Is the resident encouraged to make decisions about his/her personal care?	1	2	3	4	7
Direct Care and Nursing					
17. Does a staff person check on the resident to see if he/she is comfortable? (need a drink, a blanket, a change in position)	1	2	3	4	7
18. During the week days, is a staff person available to help the resident if he/she needs it (help getting dressed, help getting things)?	1	2	3	4	7
19. At other times, is a staff person available to help the resident if he/she needs it (help getting dressed, help getting things)?	1	2	3	4	7
20. Are the nurse aides gentle when they take care of the resident?	1	2	3	4	7
21. Do the nurse aides treat the resident with respect?	1	2	3	4	7
22. Do the nurse aides spend enough time with the resident?	1	2	3	4	7
Therapy					
23. Do the therapists spend enough time with the resident?	1	2	3	4	7

	Never	Hardly ever	Sometimes	Always	Doesn't apply
24. Does the therapy help the resident?	1	2	3	4	7
Administration					
25. Is the administration available to talk with you?	1	2	3	4	7
26. Does the administration treat you with respect?	1	2	3	4	7
Meals and Dining					
27. Does the resident think that the food is tasty?	1	2	3	4	7
28. Are foods served at the right temperature (cold foods cold, hot foods hot)?	1	2	3	4	7
29. Can the resident get the foods he/she likes?	1	2	3	4	7
30. Does the resident get enough to eat?	1	2	3	4	7
Laundry					
31. Does the resident get their clothes back from the laundry?	1	2	3	4	7
32. Does the resident's clothes come back from the laundry in good condition?	1	2	3	4	7
Resident Environment					
33. Can the resident get outside when he/she wants to, either with help or on their own?	1	2	3	4	7
34. Can you find places to talk with the resident in private?	1	2	3	4	7
35. Is the resident's room quiet enough?	1	2	3	4	7
36. Are you satisfied with the resident's room?	1	2	3	4	7
Facility Environment					
37. Are the public areas (dining room, halls) quiet enough?	1	2	3	4	7
38. Does the facility seem homelike?	1	2	3	4	7
39. Is the facility clean enough?	1	2	3	4	7
40. Is the resident's personal property safe in the facility?	1	2	3	4	7
41. Are you satisfied with the safety and security of this facility?	1	2	3	4	7
General					
42. Are your telephone calls handled in an efficient manner?	1	2	3	4	7
43. Do residents look well-groomed and cared for?	1	2	3	4	7
44. Is the staff here friendly?	1	2	3	4	7
45. Do you get adequate information from the staff about the resident's medical condition and treatment?	1	2	3	4	7
46. Are you satisfied with the medical care in this facility?	1	2	3	4	7
47. Would you recommend this facility to a family member or friend?	1	2	3	4	7
48. Overall, do you like this facility?	1	2	3	4	7

Ohio Nursing Home Resident Satisfaction Survey

		No, never	No, hardly ever	Yes, sometimes	Yes, always	Don't know; doesn't apply
1.	Are the employees courteous to you?	1	2	3	4	7
2.	Can you depend on the employees?	1	2	3	4	7
3.	Overall, do the employees seem to help each other?	1	2	3	4	7
4.	Are the employees here friendly to you?	1	2	3	4	7
5.	Do the employees who take care of you know what you like and dislike?	1	2	3	4	7
6.	During the week, are the employees available to help you if you need it?	1	2	3	4	7
7.	During the weekend, are employees available to help you if you need it?	1	2	3	4	7
8.	During the evening and night, are employees available to help you if you need it?	1	2	3	4	7
9.	Do the employees spend enough time with you?	1	2	3	4	7
10.	Do you feel confident that the employees know how to do their job?	1	2	3	4	7
11.	Overall, are you satisfied with the employees who care for you?	1	2	3	4	7
12.	Are the managers/supervisors available to talk with you?	1	2	3	4	7
13.	Do the managers/supervisors treat you with respect?	1	2	3	4	7
14.	Do you get the care and services that you need?	1	2	3	4	7
15.	Do you get enough information about your care and services?	1	2	3	4	7
16.	Do you get your medications on time?	1	2	3	4	7
17.	Is it acceptable here to make a complaint?	1	2	3	4	7
18.	Do you know who to go to here when you have a problem?	1	2	3	4	7
19.	Do your problems get taken care of?	1	2	3	4	7
20.	Do you have enough to do day to day?	1	2	3	4	7
21.	Do you get enough information about activities offered here?	1	2	3	4	7
22.	Are you satisfied with the activities offered here?	1	2	3	4	7
23.	Without family or friends to help, can you get to places you want to go?	1	2	3	4	7
24.	Do your clothes get lost in the laundry?	1	2	3	4	7
25.	Do your clothes get damaged in the laundry?	1	2	3	4	7
26.	Do you get enough to eat?	1	2	3	4	7
27.	Can you get snacks and drinks whenever you want them?	1	2	3	4	7
28.	Is the food here tasty to you?	1	2	3	4	7
29.	Do you have a choice of what to eat and drink?	1	2	3	4	7

		No, never	No, hardly ever	Yes, sometimes	Yes, always	Don't know; doesn't apply
30.	Can you get the foods you like?	1	2	3	4	7
31.	Is your food served at the right temperature (hot foods hot, cold food cold)?	1	2	3	4	7
32.	Is the dining area a pleasant place for you to eat?	1	2	3	4	7
33.	Do you like the way your meals are served here?	1	2	3	4	7
34.	Do you get enough notice when the cost to live here goes up?	1	2	3	4	7
35.	Do you feel like you are getting your money's worth?	1	2	3	4	7
36.	Do you like the location of this place?	1	2	3	4	7
37.	Are the outside walkways and grounds well taken care of?	1	2	3	4	7
38.	Does this place look attractive to you?	1	2	3	4	7
39.	Is this place kept clean enough for you?	1	2	3	4	7
40.	Can you find places to talk with your visitors in private?	1	2	3	4	7
41.	Do you have enough privacy in your room?	1	2	3	4	7
42.	Is this place quiet when it should be?	1	2	3	4	7
43.	Are you satisfied with your room?	1	2	3	4	7
44.	Do you feel safe here?	1	2	3	4	7
45.	Are your belongings safe here?	1	2	3	4	7
46.	Do you feel comfortable here?	1	2	3	4	7
47.	Do you think this is an appealing place for people to visit?	1	2	3	4	7
48.	Are the rules here reasonable?	1	2	3	4	7
49.	Can you go to bed when you like?	1	2	3	4	7
50.	Can you get something to eat in the morning no matter when you get up?	1	2	3	4	7
51.	Does the facility let you decide when to keep your door open or closed?	1	2	3	4	7
52.	Do the employees leave you alone if you don't want to do anything?	1	2	3	4	7
53.	Do the employees let you do the things you want to for yourself?	1	2	3	4	7
54.	Are you free to come and go as you are able?	1	2	3	4	7
55.	Do people who live here fit in well with each other?	1	2	3	4	7
56.	Are you treated fairly here?	1	2	3	4	7
57.	Overall, do you like living here?	1	2	3	4	7
58.	Would you recommend this place to a family member or friend?	1	2	3	4	7

Satisfaction with Care at the End of Life in Dementia (SWC-EOLD)

	Strongly disagree	Disagree	Agree	Strongly agree
1. I felt fully involved in all decision making.	1	2	3	4
2. I would probably have made different decisions if I had had more information.	1	2	3	4
3. All measures were taken to keep *[RESIDENT]* comfortable.	1	2	3	4
4. The health care team was sensitive to my needs and feelings.	1	2	3	4
5. I did not really understand *[RESIDENT'S]* condition.	1	2	3	4
6. I always knew which doctor or nurse was in charge of *[RESIDENT'S]* care.	1	2	3	4
7. I felt that *[RESIDENT]* got all necessary nursing assistance.	1	2	3	4
8. I felt that all medication issues were clearly explained to me.	1	2	3	4
9. *[RESIDENT]* received all treatments or interventions that *[HE/SHE]* could have benefited from.	1	2	3	4
10. I feel that *[RESIDENT]* needed better medical care during the last month of *[HIS/HER]* life.	1	2	3	4

Dementia Quality of Life Instrument (DQOL)

		Never	Seldom	Sometimes	Often	Very often
1.	Feel confident	1	2	3	4	5
2.	Satisfied with yourself	1	2	3	4	5
3.	Accomplished something	1	2	3	4	5
4.	Make your own decisions	1	2	3	4	5
5.	Feel happy	1	2	3	4	5
6.	Feel cheerful	1	2	3	4	5
7.	Feel content	1	2	3	4	5
8.	Feel hopeful	1	2	3	4	5
9.	Found something that made you laugh	1	2	3	4	5
10.	Joke and laugh with others	1	2	3	4	5
11.	Feel afraid	1	2	3	4	5
12.	Feel lonely	1	2	3	4	5
13.	Feel frustrated	1	2	3	4	5
14.	Feel embarrassed	1	2	3	4	5
15.	Feel angry	1	2	3	4	5
16.	Feel worried	1	2	3	4	5
17.	Feel depressed	1	2	3	4	5
18.	Feel nervous	1	2	3	4	5
19.	Feel sad	1	2	3	4	5
20.	Feel irritated	1	2	3	4	5
21.	Feel anxious	1	2	3	4	5
22.	Feel useful	1	2	3	4	5
23.	Feel people like you	1	2	3	4	5
24.	Feel lovable	1	2	3	4	5

		Not at all	A little	Somewhat	Mostly	Very
1.	Obtained pleasure from sensory awareness	1	2	3	4	5
2.	Appreciation of beauty (extent of enjoyment listening to music, listening to sounds of nature, watching animals or birds, looking at colorful things, watching clouds or the sky)	1	2	3	4	5

End of Life in Dementia – Comfort Assessment in Dying (EOLD-CAD)

		Not at all	Somewhat	A lot
1.	Discomfort	1	2	3
2.	Pain	1	2	3
3.	Restlessness	1	2	3
4.	Shortness of breath	1	2	3
5.	Choking	1	2	3
6.	Gurgling	1	2	3
7.	Difficulty swallowing	1	2	3
8.	Fear	1	2	3
9.	Anxiety	1	2	3
10.	Crying	1	2	3
11.	Moaning	1	2	3
12.	Serenity	1	2	3
13.	Peace	1	2	3
14.	Calm	1	2	3

Numeric Rating Scale for Pain

0 1 2 3 4 5 6 7 8 9 10

No pain   Moderate pain   Worst possible pain
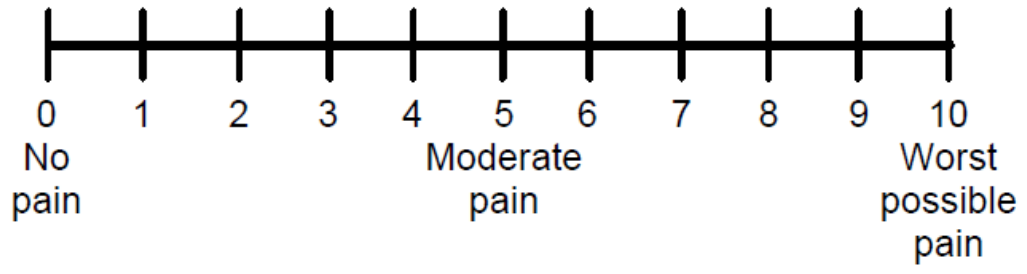
Pleasant Events Schedule Nursing Home (PES-NH)

Rate the following items according to whether they are now (or would be) a pleasant activity. Then rate whether they were **AVAILABLE during the PAST MONTH**, and then the **FREQUENCY with which you did them in the PAST WEEK**.

Activity	Now pleasant 0=no 1=yes		Available past month 0=not at all 1=yes		Frequency past week 0=not at all 1=1-6 times 2=7+ times		
1. Sitting, walking, or rolling wheelchair outside	0	1	0	1	0	1	2
2. Reading or listening to books on tape	0	1	0	1	0	1	2
3. Listening to music in your room	0	1	0	1	0	1	2
4. Having someone read you something in your room, such as the newspaper, cards	0	1	0	1	0	1	2
5. Watching T.V.	0	1	0	1	0	1	2
6. Doing crossword, jigsaw, word games puzzles, etc.	0	1	0	1	0	1	2
7. Talking on the telephone	0	1	0	1	0	1	2
8. Doing handwork (crocheting, work, etc.) woodworking, crafts, drawing, ceramics, clay	0	1	0	1	0	1	2
9. Laughing	0	1	0	1	0	1	2
10. Having a visit from family or friends	0	1	0	1	0	1	2
11. Shopping or buying things	0	1	0	1	0	1	2
12. Sharing a meal with friend or family	0	1	0	1	0	1	2
13. Making or eating snacks	0	1	0	1	0	1	2
14. Wearing favorite clothes	0	1	0	1	0	1	2
15. Listening to the sounds of nature	0	1	0	1	0	1	2
16. Getting or sending cards, letters	0	1	0	1	0	1	2
17. Going on an outing (e.g., visit home, out to eat, visit to family/relative)	0	1	0	1	0	1	2
18. Having coffee, tea, cocoa with others	0	1	0	1	0	1	2
19. Being complimented	0	1	0	1	0	1	2
20. Being told I am loved	0	1	0	1	0	1	2
21. Exercising (walking, stretch class, physical therapy)	0	1	0	1	0	1	2
22. Going for a ride in a car	0	1	0	1	0	1	2
23. Grooming (wearing make-up, shaving, having nails done)	0	1	0	1	0	1	2
24. Having a shower or bath	0	1	0	1	0	1	2
25. Recalling or discussing past events	0	1	0	1	0	1	2
26. Participating in a group events, Trivia, Bingo, current activity	0	1	0	1	0	1	2
27. Attending religious services	0	1	0	1	0	1	2
28. Listening to a musical performance (e.g., in dining room)	0	1	0	1	0	1	2
29. Talking with another resident	0	1	0	1	0	1	2
30. Watching others in hallway	0	1	0	1	0	1	2

Short Pleasant Events Schedule for Alzheimer's Disease (PES-AD)

	How often in the past month 0=not at all 1=a few times (1-6) 2=often (7 or more) **Circle ONE number**			How available in the past month 0=not at all 1=a few times (1-6) 2=often (7 or more) **Circle ONE number**			How pleasant was it or would it be now?			
							Past 0=didn't enjoy 1=enjoyed **Circle ONE number**		**Now** 0=doesn't enjoy 1=enjoys **Circle ONE number**	
1. Being outside	0	1	2	0	1	2	0	1	0	1
2. Shopping or buying things	0	1	2	0	1	2	0	1	0	1
3. Reading or listening to stories	0	1	2	0	1	2	0	1	0	1
4. Listening to music	0	1	2	0	1	2	0	1	0	1
5. Watching TV	0	1	2	0	1	2	0	1	0	1
6. Laughing	0	1	2	0	1	2	0	1	0	1
7. Having meals with friends and family	0	1	2	0	1	2	0	1	0	1
8. Making or eating snacks	0	1	2	0	1	2	0	1	0	1
9. Helping around the house	0	1	2	0	1	2	0	1	0	1
10. Being with family	0	1	2	0	1	2	0	1	0	1
11. Wearing favorite clothes	0	1	2	0	1	2	0	1	0	1
12. Listening to the sounds of nature	0	1	2	0	1	2	0	1	0	1
13. Getting or sending letters/cards	0	1	2	0	1	2	0	1	0	1
14. Going on an outing	0	1	2	0	1	2	0	1	0	1
15. Having coffee, tea, etc. with friends	0	1	2	0	1	2	0	1	0	1
16. Being complimented	0	1	2	0	1	2	0	1	0	1
17. Exercising (walking, dancing)	0	1	2	0	1	2	0	1	0	1
18. Going for a rider in the car	0	1	2	0	1	2	0	1	0	1
19. Grooming (wearing make-up, shaving, etc.)	0	1	2	0	1	2	0	1	0	1
20. Recalling and discussing past events	0	1	2	0	1	2	0	1	0	1

UCLA Loneliness Scale

	I often feel this way	I sometimes feel this way	I rarely feel this way	I never feel this way
1. I am unhappy doing so many things alone	O	S	R	N
2. I have nobody to talk to	O	S	R	N
3. I cannot tolerate being so alone	O	S	R	N
4. I lack companionship	O	S	R	N
5. I feel as if nobody really understands me	O	S	R	N
6. I find myself waiting for people to call or write	O	S	R	N
7. There is no one I can turn to	O	S	R	N
8. I am no longer close to anyone	O	S	R	N
9. My interests and ideas are not shared by those around me	O	S	R	N
10. I feel left out	O	S	R	N
11. I feel completely alone	O	S	R	N
12. I am unable to reach out and communicate with those around me	O	S	R	N
13. My social relationships are superficial	O	S	R	N
14. I feel starved for company	O	S	R	N
15. No one really knows me well	O	S	R	N
16. I feel isolated from others	O	S	R	N
17. I am unhappy being so withdrawn	O	S	R	N
18. It is difficult for me to make friends	O	S	R	N
19. I feel shut out and excluded by others	O	S	R	N
20. People are around me but not with me	O	S	R	N

Quality of Life Scale (QOLS)

		Delighted	Pleased	Mostly satisfied	Mixed	Mostly dissatisfied	Unhappy	Terrible
1.	Material comforts, home food, conveniences, financial security	7	6	5	4	3	2	1
2.	Health - being physically fit and vigorous	7	6	5	4	3	2	1
3.	Relationships with parents, siblings & other relatives - communicating, visiting, helping	7	6	5	4	3	2	1
4.	Having and rearing children	7	6	5	4	3	2	1
5.	Close relationships with spouse or significant other	7	6	5	4	3	2	1
6.	Close friends	7	6	5	4	3	2	1
7.	Helping and encouraging others, volunteering, giving advice	7	6	5	4	3	2	1
8.	Participating in organizations and public affairs	7	6	5	4	3	2	1
9.	Learning - attending school, improving understanding, getting additional knowledge	7	6	5	4	3	2	1
10.	Understanding yourself - knowing your assets and limitations - knowing what life is about	7	6	5	4	3	2	1
11.	Work - job or in home	7	6	5	4	3	2	1
12.	Expressing yourself creatively	7	6	5	4	3	2	1
13.	Socializing - meeting other people, doing things, parties, etc.	7	6	5	4	3	2	1
14.	Reading, listening to music, or observing entertainment	7	6	5	4	3	2	1
15.	Participating in active recreation	7	6	5	4	3	2	1
16.	Independence, doing for yourself	7	6	5	4	3	2	1

Perceptions of Pain Management

	Yes	No
1. Do you ever have pain or discomfort that prevents you from going to sleep or wakes you from sleeping?	1	0
2. Have you ever had to wait too long for your pain medicine?	1	0
3. When the nurse's aides move you, do they do everything they can to keep from causing you pain or discomfort?	1	0
4. Did you receive any information about the medicines that are being used to manage your pain or discomfort?	1	0
If yes Would you have liked more information than you received?	1	0
If no Would you have wanted some?	1	0
5. In general, are you given enough medicine to treat your pain or discomfort?	1	0

Quality of Dying in Long-Term Care – Cognitively Intact (QOD-LTC-C)

How true is it that….	Not at all	A little bit	A moderate amount	Quite a Bit	Completely
1. [HE/SHE] was able to help others through time together, gifts, or wisdom.	1	2	3	4	5
2. [HE/SHE] was able to make a positive difference in the lives of others.	1	2	3	4	5
3. [HE/SHE] was able to share important things with [HIS/HER] family.	1	2	3	4	5
4. Despite [HIS/HER] illness, [HE/SHE] had a sense of meaning in [HIS/HER] life.	1	2	3	4	5
5. [HE/SHE] was able to say important things to those close to [HIM/HER].	1	2	3	4	5
6. [RESIDENT] was able to retain [HIS/HER] sense of humor.	1	2	3	4	5
7. [RESIDENT] felt prepared to die.	1	2	3	4	5
8. Thoughts of dying frightened [HIM/HER].	1	2	3	4	5
9. [RESIDENT] had regrets about the way [HE/SHE] lived [HIS/HER] life.	1	2	3	4	5
10. [RESIDENT] appeared to be at peace.	1	2	3	4	5
11. [RESIDENT] was at peace with God.	1	2	3	4	5
12. Although [HE/SHE] could not control certain aspects of [HIS/HER] illness, [RESIDENT] had sense of control about [HIS/HER] treatment decisions.	1	2	3	4	5
13. [RESIDENT] participated as much as [HE/SHE] wanted in the decisions about [HIS/HER] care.	1	2	3	4	5
14. As [HIS/HER] illness progressed, [HE/SHE] knew where to go for answers to [HIS/HER] questions.	1	2	3	4	5
15. In general, [RESIDENT] knew what to expect about the course of [HIS/HER] illness.	1	2	3	4	5
16. There was someone in [HIS/HER] life with whom [HE/SHE] could share [HIS/HER] deepest thoughts.	1	2	3	4	5
17. [RESIDENT] had a physician whom [HE/SHE] trusted.	1	2	3	4	5
18. [HE/SHE] spent as much time as [HE/SHE] wanted with [HIS/HER] family.	1	2	3	4	5
19. [RESIDENT] received compassionate physical touch daily.	1	2	3	4	5
20. [RESIDENT] was able to maintain [HIS/HER] dignity.	1	2	3	4	5
21. [RESIDENT] had named a decision-maker in the event that [HE/SHE] was no longer able to make decisions.	1	2	3	4	5
22. [RESIDENT] had funeral arrangements planned.	1	2	3	4	5
23. [RESIDENT] had treatment preferences in writing.	1	2	3	4	5

(An 11 item version for all decedents [both cognitively intact and impaired] is also available; QOD-LTC)

Assisted Living Social Activity Scale (AL-SAS)

		Yes	No
1.	Writing letters	1	0
2.	Reading	1	0
3.	Working on a hobby	1	0
4.	Talking on the telephone	1	0
5.	Attending arts and crafts	1	0
6.	Playing cards, bingo, games	1	0
7.	Attending religious activities	1	0
8.	Going to movies	1	0
9.	Going out to eat and drink	1	0
10.	Shopping, browsing in stores	1	0
11.	Going for walks	1	0

Charge Nurse Support Scale

	Never	Seldom	Occasionally	Often	Always
1. My charge nurse recognizes my ability to deliver quality care.	1	2	3	4	5
2. My charge nurse tries to meet my needs.	1	2	3	4	5
3. My charge nurse knows me well enough to know when I have concerns about resident care.	1	2	3	4	5
4. My charge nurse tries to understand my point of view when I speak to them.	1	2	3	4	5
5. My charge nurse tries to meet my needs in such ways as informing me of what is expected of me when working with my residents.	1	2	3	4	5
6. I can rely on my charge nurse when I ask for help, for example, if things are not going well between myself and my co-workers or between myself and residents and/or their families.	1	2	3	4	5
7. My charge nurse keeps me informed of any major changes in the work environment or organization.	1	2	3	4	5
8. I can rely on my charge nurse to be open to any remarks I may make to him/her.	1	2	3	4	5
9. My charge nurse keeps me informed of any decisions that were made in regards to my residents.	1	2	3	4	5
10. My charge nurse strikes a balance between clients/families' concerns and mine.	1	2	3	4	5
11. My charge nurse encourages me even in difficult situations.	1	2	3	4	5
12. My charge nurse makes a point of expressing appreciation when I do a good job.	1	2	3	4	5
13. My charge nurse respects me as a person.	1	2	3	4	5
14. My charge nurse makes time to listen to me.	1	2	3	4	5
15. My charge nurse recognizes my strengths and areas for development.	1	2	3	4	5

Nursing Home Survey on Patient Safety (Modified for Assisted Living)

	Strongly disagree	Disagree	Neither	Agree	Strongly agree
1. Resident safety is never sacrificed to get more work done	1	2	3	4	5
2. Our procedures and systems are good at preventing errors in resident care from happening	1	2	3	4	5
3. It is just by chance that more serious mistakes don't happen around here*	1	2	3	4	5
4. When someone gets really busy in this facility, other staff help out	1	2	3	4	5
5. We have enough staff to handle the workload	1	2	3	4	5
6. Staff have to hurry because they have too much work to do*	1	2	3	4	5
7. Residents' needs are met during shift changes	1	2	3	4	5
8. It is hard to keep residents safe here because so many staff quit their jobs*	1	2	3	4	5
9. Staff follow supervisors' instructions to care for residents	1	2	3	4	5
10. Staff use shortcuts to get their work done faster*	1	2	3	4	5
11. To make work easier, staff often ignore supervisors' instructions*	1	2	3	4	5
12. Staff are blamed when a resident is harmed*	1	2	3	4	5
13. Staff are afraid to report their mistakes*	1	2	3	4	5
14. Staff are treated fairly when they make mistakes	1	2	3	4	5
15. Staff feel safe reporting their mistakes	1	2	3	4	5
16. Staff are told what they need to know before taking care of a resident for the first time	1	2	3	4	5
17. Staff are told right away when there is a change in how to care for a resident	1	2	3	4	5
18. We have all the information we need when new residents come to our facility	1	2	3	4	5
19. Staff are given all the information they need to care for residents	1	2	3	4	5
20. When staff report something that could harm a resident, someone takes care of it	1	2	3	4	5
21. In this facility, we talk about ways to keep incidents from happening again	1	2	3	4	5
22. Staff tell someone if they see something that might harm a resident	1	2	3	4	5
23. In this facility, we discuss ways to keep residents safe from harm	1	2	3	4	5
24. Staff ideas and suggestions are valued in this facility	1	2	3	4	5

	Strongly disagree	Disagree	Neither	Agree	Strongly agree
25. Staff opinions are ignored in this facility*	1	2	3	4	5
26. It is easy for staff to speak up about problems in this facility	1	2	3	4	5
27. My supervisor listens to staff ideas and suggestions about resident safety	1	2	3	4	5
28. My supervisor says a good word to staff who follow the right procedures	1	2	3	4	5
29. My supervisor pays attention to safety problems in this facility	1	2	3	4	5
30. Residents are well cared for in this facility	1	2	3	4	5
31. This facility does a good job keeping residents safe	1	2	3	4	5
32. This facility is a safe place for residents	1	2	3	4	5
33. Management asks staff how the facility can improve resident safety	1	2	3	4	5
34. Management listens to staff ideas and suggestions to improve resident safety	1	2	3	4	5
35. Management often walks around the facility to check on resident care	1	2	3	4	5
36. This facility lets the same mistakes happen again and again*	1	2	3	4	5
37. It is easy to make changes to improve resident safety in this facility	1	2	3	4	5
38. This facility is always doing things to improve resident safety	1	2	3	4	5

*Indicates reverse coded items.

Direct Care Worker Job Satisfaction Scale

How satisfied are you with...	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
1. The recognition you get for your work?	3	2	1	0
2. The amount of responsibility you have?	3	2	1	0
3. The way this [facility/agency] is managed?	3	2	1	0
4. The attention paid to suggestions you make?	3	2	1	0
5. Your job security?	3	2	1	0
6. Your fringe benefits?	3	2	1	0
7. The teamwork between [direct care workers] and staff?	3	2	1	0
8. The attention paid to your observations or opinions?	3	2	1	0
9. The supplies you use on the job?	3	2	1	0
10. The pace or speed at which you have to work?	3	2	1	0
11. The way employee complaints are handled?	3	2	1	0
12. The feedback you get about how well you do your job?	3	2	1	0
13. The amount of control you have over your job?	3	2	1	0
14. The way management and [direct care] staff work together?	3	2	1	0
15. Your opportunities for promotion?	3	2	1	0
16. The amount of time you have to discuss resident problems with other [direct care] staff?	3	2	1	0

Grief Support in Healthcare Scale

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	My family understands how close I am to the residents.	1	2	3	4	5
2.	My friends understand how close I am to the residents.	1	2	3	4	5
3.	My co-workers understand how close I am to the residents.	1	2	3	4	5
4.	My supervisors understand how close I am to the residents.	1	2	3	4	5
5.	Family members of the residents understand how close I am to the residents.	1	2	3	4	5
6.	My family knows that I have grief when residents die.	1	2	3	4	5
7.	My friends know that I have grief when residents die.	1	2	3	4	5
8.	My co-workers know that I have grief when residents die.	1	2	3	4	5
9.	My supervisors know that I have grief when residents die.	1	2	3	4	5
10.	Family members of the residents know that I have grief when residents die.	1	2	3	4	5
11.	My facility often holds memorial services for residents who have died.	1	2	3	4	5
12.	I am often able to attend memorial services inside my facility.	1	2	3	4	5
13.	I am often invited to attend memorial services outside of the facility.	1	2	3	4	5
14.	I am often able to attend memorial services for residents outside of the facility.	1	2	3	4	5
15.	My facility keeps me informed about the deaths of residents.	1	2	3	4	5

Job Satisfaction Subscale (Michigan Organizational Assessment Questionnaire, MOAQ)

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. All in all, I am satisfied with my job.	1	2	3	4	5	6	7
2. In general, I don't like my job.	1	2	3	4	5	6	7
3. In general, I like working here.	1	2	3	4	5	6	7

Nursing Assistant Barriers Scale (NABS)

		Not a problem at all	A small problem	A medium problem	A big problem	A very big problem
1.	NAs are assigned too many residents to care for each day.	1	2	3	4	5
2.	My supervisor doesn't listen when I say there is something wrong with a resident.	1	2	3	4	5
3.	The NAs don't work together as a team.	1	2	3	4	5
4.	The residents are rude and disrespectful to NAs.	1	2	3	4	5
5.	Things make me mad and I don't know how to handle that.	1	2	3	4	5
6.	Not enough time to get everything done.	1	2	3	4	5
7.	LPNs are rude and disrespectful to NAs.	1	2	3	4	5
8.	RNs are rude and disrespectful to NAs.	1	2	3	4	5
9.	Other NAs are "slackers" who don't want to do their jobs.	1	2	3	4	5
10.	It is hard to handle residents who have dementia (confused or disoriented).	1	2	3	4	5
11.	I am moved from resident to resident and don't get to care for the same residents each day.	1	2	3	4	5
12.	Family members don't listen to what I have to say about the resident	1	2	3	4	5
13.	The work is the same, day after day.	1	2	3	4	5
14.	New NAs don't know what to do and I don't have time to teach them.	1	2	3	4	5

Shortell Organization and Management Survey, Nursing Home Adaptation – Communication and Leadership Subscales

SAMPLE ITEMS

	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1. I take pride in this facility	1	2	3	4	5
2. I identify with the facility goals	1	2	3	4	5
3. I am part of the team	1	2	3	4	5
4. Nurses are certain where they stand	1	2	3	4	5
5. Nursing leadership is in touch with staff concerns	1	2	3	4	5
6. Decisions are made with staff input	1	2	3	4	5
7. Staff meetings are used to resolve issues	1	2	3	4	5
8. Staff interests are represented at higher levels of the facility	1	2	3	4	5
9. Standards of excellence are emphasized	1	2	3	4	5
10. We get information when we need it	1	2	3	4	5
11. Physicians are available when they are needed	1	2	3	4	5
12. We get information about changes in resident status	1	2	3	4	5
13. Our facility meets patient care goals	1	2	3	4	5
14. Our residents experience very good outcomes	1	2	3	4	5
15. Our facility does a good job of meeting family needs	1	2	3	4	5

To request permission for the entire questionnaire:

http://www98.griffith.edu.au/dspace/bitstream/handle/10072/60507/93982_1.pdf?sequence=1

Maslach Burnout Inventory

		Never	A few times in total over six months	Almost or about once a month	A few times a month	Once a week	A few times a week	Each day
1.	I feel emotionally drained from my work.	0	1	2	3	4	5	6
2.	I feel used up at the end of a workday.	0	1	2	3	4	5	6
3.	I feel tired when I get up in the morning and have to face another day on the job.	0	1	2	3	4	5	6
4.	I can easily understand how my residents feel about things.	0	1	2	3	4	5	6
5.	I feel I treat some residents as if they were impersonal objects.	0	1	2	3	4	5	6
6.	Working with people all day is really a strain for me.	0	1	2	3	4	5	6
7.	I deal very effectively with the problems of my residents.	0	1	2	3	4	5	6
8.	I feel burned out from my work.	0	1	2	3	4	5	6
9.	I feel I am positively influencing other people's lives through my work.	0	1	2	3	4	5	6
10.	I have become more callous toward people since I took this job.	0	1	2	3	4	5	6
11.	I worry that this job is hardening me emotionally.	0	1	2	3	4	5	6
12.	I feel very energetic.	0	1	2	3	4	5	6
13.	I feel frustrated by my job.	0	1	2	3	4	5	6
14.	I feel I'm working too hard on my job.	0	1	2	3	4	5	6
15.	I don't really care what happens to some residents.	0	1	2	3	4	5	6
16.	Working with people directly puts too much stress on me.	0	1	2	3	4	5	6
17.	I can easily create a relaxed atmosphere with my residents.	0	1	2	3	4	5	6
18.	I feel exhilarated after working closely with residents.	0	1	2	3	4	5	6
19.	I have accomplished many worthwhile things in this job.	0	1	2	3	4	5	6
20.	I feel like I'm at the end of my rope.	0	1	2	3	4	5	6
21.	In my work, I deal with emotional problems very calmly.	0	1	2	3	4	5	6
22.	I feel like some residents and families blame me for some of their problems.	0	1	2	3	4	5	6

Nursing Home Administrator Job Satisfaction Scale (NHA-JQ)

	Very poor									Excellent
Co-Workers										
1. Rate the people you work with	1	2	3	4	5	6	7	8	9	10
2. Rate whether you feel part of a team effort	1	2	3	4	5	6	7	8	9	10
3. Rate cooperation among staff	1	2	3	4	5	6	7	8	9	10
4. Rate whether staff place reasonable demands on you	1	2	3	4	5	6	7	8	9	10
Work Demands										
1. Rate the support available to you in your job	1	2	3	4	5	6	7	8	9	10
2. Rate the opportunities you have to discuss your concerns	1	2	3	4	5	6	7	8	9	10
3. Rate the demands residents and family place on you	1	2	3	4	5	6	7	8	9	10
4. Rate whether you feel you are doing a good job	1	2	3	4	5	6	7	8	9	10
Work Content										
1. Rate how much you enjoy working with residents	1	2	3	4	5	6	7	8	9	10
2. Rate how your role influences the lives of residents	1	2	3	4	5	6	7	8	9	10
3. Rate your closeness to residents and families	1	2	3	4	5	6	7	8	9	10
4. Rate the amount of autonomy you have	1	2	3	4	5	6	7	8	9	10
Workload										
1. Rate your workload	1	2	3	4	5	6	7	8	9	10
2. Rate your work schedule	1	2	3	4	5	6	7	8	9	10
Work Skills										
1. Rate whether the demands on you are compatible with your skills	1	2	3	4	5	6	7	8	9	10
2. Rate the adequacy of the training you have to perform your job	1	2	3	4	5	6	7	8	9	10
Rewards										
1. Rate how fairly you are paid	1	2	3	4	5	6	7	8	9	10
2. Rate your chances of further advancement	1	2	3	4	5	6	7	8	9	10

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Intent to Leave					
1. All things considered, I would like to find a comparable job in a different organization	1	2	3	4	5
2. I am thinking about quitting	1	2	3	4	5
3. It is likely that I will actively look for a different organization to work for in the next year	1	2	3	4	5
4. The results of my job search are encouraging	1	2	3	4	5
5. I will probably look for a new job in the near future	1	2	3	4	5
6. At the present time, I am actively searching for another job in another organization	1	2	3	4	5
7. I intend to quit	1	2	3	4	5

Workplace Violence Tool

Did you experience any of the following…	Yes	No
1. Physical assault (e.g. being spit on, bitten, hit, pushed)	1	0
2. Threat of assault (verbal or written threats intending harm)	1	0
3. Emotional abuse such as hurtful attitudes or remarks (insults, gestures, humiliation before the work team, coercion)	1	0
4. Verbal sexual harassment (repeated, unwanted intimate questions or remarks of a sexual nature)	1	0